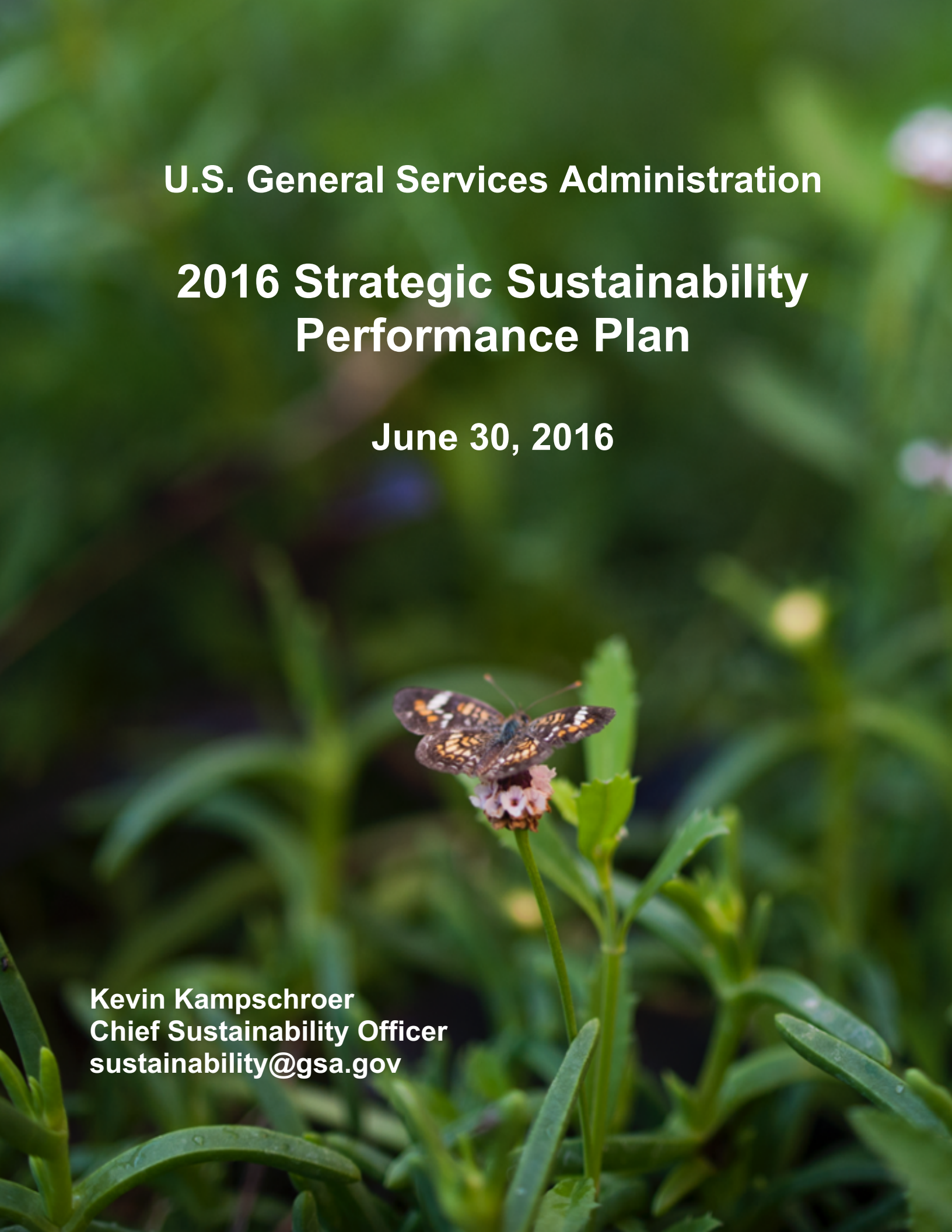

U.S. General Services Administration

2016 Strategic Sustainability Performance Plan

June 30, 2016

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Policy Statement

The U.S. General Services Administration (GSA) is committed to ensuring the long-term viability, security, responsiveness, and efficiency of the Federal Government. As a proactive Federal partner, GSA recognizes a fiduciary obligation to provide Federal agencies with the spaces, services, products, and vehicles they need to carry out their missions today, while advancing the economic, social, and environmental well-being of the United States tomorrow. GSA also understands its responsibility to the broader public to serve as an economic catalyst while safeguarding our nation's valuable resources, and remains committed to operating in a fair, efficient, open, and transparent manner.

This past December in Paris, 195 countries, with the United States in the lead, agreed to reduce emissions of greenhouse gases (GHG) "as soon as possible" with the goal of limiting global warming to "well below 2 degrees" Centigrade. With this urgent new global commitment in mind, GSA is redoubling its efforts to lead a nationwide transition to clean power use. Therefore, in fiscal year (FY) 2016, GSA committed to increasing its renewable power use from 46 percent in FY 2016 to 100 percent in FY 2025. This increase in renewable power will allow GSA to reduce its Scope 1 and 2 GHG emissions by 73 percent (and Scope 3 emissions by 83 percent) by FY 2025 from FY 2008 levels.

In response to Executive Order (EO) 13693, *Planning for Federal Sustainability in the Next Decade*, in FY 2016 GSA also set new goals for vehicle fleet GHG per mile, design of green and net-zero-energy buildings, and supply chain engagement on GHG reduction. Having surpassed its commitments under the President's Performance Contracting Challenge more than six months ahead of schedule, GSA is also extending its targets for the use of Energy Savings Performance Contracts by $50 million in both FY 2017 and 2018. And in FY 2016, for the first time, GSA began estimating GHG emissions from office space that GSA leases from the private sector, as well as from both privately leased and Government-owned space that is managed by GSA but occupied by other Federal agencies. These goals and practices will help GSA and other agencies continue to increase the sustainability of our operations, and reduce adverse environmental impacts and associated costs.

As an integral aspect of GSA's operations, sustainability performance is managed by a strategic advisory council chaired by our Chief Sustainability Officer, Mr. Kevin Kampschroer, and consisting of senior representatives from the Federal Acquisition Service, Office of Administrative Services, GSA IT, Office of Government-wide Policy, and Public Buildings Service.

GSA has demonstrated year after year that "Going Green Saves Green" through the savings and efficiencies generated by its sustainability initiatives. (As one example, between FY 2008 and 2015, GSA saved over $340 million in energy and water costs from efficiency improvements implemented since 2003.) GSA is committed to serving as a proactive Federal partner going forward to help secure a prosperous and sustainable future for the American people.

Denise Turner Roth
Administrator

Executive Summary

Goal 1: Greenhouse Gas (GHG) Reduction

The international scientific community recognizes climate change as a global threat to human health and well-being. GSA is working to reduce our emissions of greenhouse gases (GHG) that drive climate change. Scope 1 includes emissions from burning fuel in GSA-owned buildings and vehicles; Scope 2 includes indirect emissions from purchased electricity, steam, and hot water; and Scope 3 includes other indirect emissions.

Scope 1 & 2 GHG Emissions

As the leading provider of real estate, acquisition, and technology services to the Federal Government, GSA plays a crucial role in meeting Government-wide carbon reduction goals. On March 17, 2015, President Obama committed to reduce the Federal Scopes 1 and 2 GHG footprint to 40 percent below 2008[1] levels by 2025. Having already surpassed the 40-percent reduction level by the end of 2013, GSA will maintain its leadership in the Federal sector by reducing GHG emissions by 73 percent from 2008 levels by 2025.[2]

Reducing GHG from Buildings and Vehicles

GSA tracks Scopes 1 & 2 GHG emissions from our internal vehicle fleet and from buildings that GSA occupies and manages for other Federal agencies. Over 99 percent of GSA's Scope 1 and 2 GHG emissions are from buildings. To meet its GHG reduction goal, GSA will continue to improve building energy efficiency, install advanced and renewable energy technologies, and purchase renewable energy, as described below in the Sustainable Buildings and Clean and Renewable Energy sections. GSA will also continue to reduce vehicle emissions by our fleet and invest in hybrid, electric, and other types of alternative-fuel vehicles (AFV).

Shrinking Our Footprint

From 2012 through 2015, GSA reduced its portfolio of GSA-occupied office and warehouse space by over 1.4 million square feet, or 21 percent. GSA achieved this outcome through a variety of initiatives and transformations. Most prominently, GSA is optimizing its workspace layouts to better accommodate the work that occurs in these environments. GSA is shifting to a more flexible, open-plan workplace environment that maximizes natural light and equalizes private space for all space occupants. Sharing desks, implementing an internal space allocation policy, and continuing to enable and support mobile work have contributed to GSA's success in reducing our physical footprint. In 2016, GSA expects to further reduce its office footprint by over 300,000 usable square feet (USF) and warehouse footprint by 800,000 USF, for over 1 million USF in additional reductions.

The "shrink the footprint" model—prototyped at GSA's Central Office building at 1800 F Street, NW in Washington, DC—is paving the way for other agencies to avoid costs and reduce GHGs, while offering their employees attractive, modern office layouts and technology-enabled, flexible work options.

Tracking Fugitive Emissions

In 2014, GSA estimated and reported fugitive hydrofluorocarbon emissions for the first time.[3] These powerful GHGs accounted for approximately 1 percent of our Scopes 1 and 2 emissions inventory in 2015. GSA will

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[1] Unless otherwise noted, references to years in this report are to Federal fiscal years (Oct. 1 – Sept. 30).
[2] Barring dramatic and unforeseen cost or budget developments related to renewable energy use. See Goal 3, Clean & Renewable Energy.
[3] GSA's Scope 1 emissions inventory now includes estimated fugitive emissions of hydrofluorocarbon refrigerants from HVAC chillers used for air conditioning. Initial analysis suggests that this is GSA's largest single category of fugitive emissions.

continue to monitor these emissions, with a focus on preventing leaks and promoting the future use of low-Global Warming Potential (GWP) refrigerants where feasible.

Scope 3 GHG Emissions

Since 2008, GSA has worked to reduce four categories of Scope 3 GHG emissions: employee business travel, employee commuting, electrical transmission and distribution, and waste-related emissions, including from solid waste and wastewater management. By 2015, GSA had reduced emissions in these categories by over 30 percent, far exceeding our goal of 14.8 percent.

GSA is currently working to add two major categories—leased space and product and service supply chains—to its management of indirect (Scope 3) GHG emissions. GSA will reduce Scope 3 emissions by up to 83 percent from 2008 levels by 2025.[4]

Leased Space Emissions Reporting

GSA has completed a baseline (2008) estimate of Scope 3 emissions from leased office space, an important component of both GSA's and other Federal agencies' carbon footprints. In 2016, GSA will begin to collect lease-allocated emissions (or utility data needed to calculate emissions) from commercial landlords for all new leases over 10,000 rentable square feet. GSA, in turn, is working to provide other Federal agencies with estimates of the emissions related to their assigned GSA-managed space for inclusion in their own Scope 3 baselines and inventories.

Supply Chain Emissions Disclosure

GSA was the first Federal agency to partner with the nonprofit CDP Supply Chain initiative and in 2016 is working with this program to research the GHG emissions and management practices of over 200 of our largest suppliers of products and services. This research will help GSA continue to add and refine carbon management and disclosure requirements within internal and Government-wide product and service contracts. These initiatives should reduce contract costs and supply chain GHG emissions in the long term, as more contractors respond by establishing their own GHG inventories and working to reduce their GHG emissions, energy costs, and exposure to climate change risks.

Goal 2: Sustainable Buildings

The GSA Public Buildings Service (PBS) owns or leases almost 8,800 assets, comprising more than 374.1 million square feet of workspace used by 1.1 million Federal employees, and is the steward for 374 historic properties.

Energy Use Intensity

The Federal Government's primary measure of energy efficiency is energy usage intensity (EUI) in BTUs (British thermal units) per gross square foot, which GSA calculates across all owned and leased space where GSA pays energy bills. In 2015, GSA reduced its EUI by over 30 percent since 2003, and will reduce EUI by another 25 percent by 2025, for a total reduction of 47.5 percent below the 2003 baseline. GSA's sustained efforts resulted in $83.6 million in avoided utility costs in 2015 as compared to our 2003 level of EUI.

GSA will continue to implement a variety of operating and equipment-replacement strategies to improve energy performance. EUI remains perhaps the most challenging of GSA's sustainability goals, due to the expense of

[4] Barring dramatic and unforeseen cost or budget developments related to renewable energy use. See Goal 3, Clean & Renewable Energy. GSA's efforts to measure Scope 3 emissions from leased space and supply chains are preliminary, and these categories are not included in GSA's Scope 3 reduction target.

renovating physical infrastructure and the difficulty of transforming tenant behavior while maintaining comfort and satisfaction.

Gauging and Cutting Energy Use

GSA uses a variety of tools and techniques to monitor its progress in reducing energy use and pinpoint areas for improvement.

Rapid Building Assessments

As required by the Energy Independence and Security Act (EISA) sec. 432, GSA annually identifies facilities responsible for 75 percent of portfolio energy use and audits these facilities every 4 years (25 percent of them each year) to identify cost-effective efficiency measures. Rapid Building Assessment technology allows GSA to evaluate these facilities at a fraction of the price of a traditional audit.

To date, GSA has completed virtual assessments in 197 buildings with 75 additional audits currently underway in FY 2016. This targeted portfolio totals 95,697,173 square feet and consumes 1,323,356 MWh of electricity, which represents an annual utility bill of $154,374,249. To date, $18,383,020 in cost savings have accrued based on 514 operational and 463 retrofit recommended actions.

Fault Detection

GSA's networked building analytics, fault detection, and diagnostic tool, GSAlink, allows GSA to reduce energy consumption by automatically identifying potentially wasteful system malfunctions. By identifying these faults, GSAlink helps PBS bring the building systems back to their commissioned state. This commissioned state is maintained through 24/7 monitoring and ongoing commissioning.

To date GSAlink has identified over 33,000 faults where GSA building equipment was not performing optimally, as intended. Of those 33,000 faults, 30,793 faults have been successfully investigated and addressed by PBS, with 2,387 faults currently in process. By the end of 2016, GSA plans to integrate GSAlink with the National Computerized Maintenance Management System, creating a streamlined user workflow and allowing for automatic generation of work orders when faults are detected.

Re/Retrocommissioning

"Commissioning" is a process to ensure that new buildings operate as intended, and staff are prepared to properly operate and maintain systems and equipment. Each year, GSA selects a number of facilities for re- and retrocommissioning (applying commissioning procedures to existing buildings). GSA conducts these projects through the U.S. Department of Energy's (DOE) Energy Efficiency Expert Evaluations program and is working towards developing an in-house re-tuning program.

High-Performance and Sustainable Buildings

The Guiding Principles for Sustainable Federal Buildings (Guiding Principles) define minimum green building standards for all new federally owned buildings, for a percentage of existing buildings, and for buildings that Federal agencies lease. GSA exceeded the mandated 15 percent goal for existing owned and leased buildings by the end of 2015, as set out in EO 13514, leading the Federal Government in the percentage of agency buildings meeting the Guiding Principles. Per EO 13693, GSA has set a target for of 25 percent of existing buildings above 5,000 GSF to comply with the Guiding Principles by FY 2025.

GSA's Office of Federal High-Performance Green Buildings (OFHPGB) provides best practices, tools, standards, and information to help Federal agencies green their building portfolios. OFHPGB has recently provided guidance about daylighting, deep energy retrofits and energy savings performance contracts (ESPCs), green roofs, integrated project delivery, plug load management, sub metering, and water conservation, among other topics. OFHPGB also publishes the Sustainable Facilities Tool, a comprehensive resource for cost-effective strategies to make workplaces more sustainable.

Technology Evaluations

GSA's Green Proving Ground (GPG) program evaluates pre- and early-commercial stage building technologies, accelerating the transition from bench-scale technology to commercial viability. GPG has completed 25 technology assessments to date and identified 15 of these technologies as having broad deployment potential. Examples of some of the most recent evaluations include socially driven HVAC optimization, electrochromic windows for land ports-of-entry, and LED fixtures with integrated controls. Seven GPG-evaluated technologies have been or will be deployed in over 200 GSA-owned Federal buildings nationwide, resulting in annual energy savings of 310 billion BTUs.

Sustainable Workplaces and Locations

Through its Total Workplace program, GSA supports customer agencies' Reduce the Footprint efforts to reduce costs and GHGs by offering attractive, modern office layouts and technology-enabled, flexible work options. GSA set up green teams and participates in the U.S. Environmental Protection Agency's (EPA) Federal Green Challenge. These are volunteer-driven efforts to engage tenants on practices such as recycling, bicycle commuting, energy efficiency, and reuse/donation of unwanted items.

GSA worked with EPA's Office of Sustainable Communities to develop a quantitative measure and tool, the Smart Location Calculator, for evaluating location efficiency of GSA's real estate portfolio and proposed locations. Using GIS tools, GSA can evaluate GHG implications of potential locations to encourage improvement over the status quo when selecting new locations. GSA has calculated the average score for the GSA inventory, as well as assigned an individual score to each facility, and as of 2015, has made the score an agency-wide Blueprint Measure, which the agency will work to improve over time through consideration of these scores in lease transactions and selection of sites for new Federal facilities.

Healthy Buildings

GSA is partnering with the U.S. Department of Health and Human Services—Centers for Disease Control and Prevention (HHS) and New York City agencies, to develop a voluntary certification program called FITWEL to promote health and wellness through the design of workplace environments. Buildings with healthy indoor air and food options, designs that facilitate active occupant behaviors, and similar programs can prevent or control chronic diseases. The FITWEL certification will initially be available to facilities owned or managed by GSA, HHS, and the City of New York, but is being designed for other facilities, including schools, hospitals, businesses, and retail outlets.

Goal 3: Clean & Renewable Energy

This past December in Paris, 195 countries, with the United States in the lead, agreed to reduce emissions of greenhouse gases (GHG) "as soon as possible" with the goal of limiting global warming to "well below 2 degrees" Centigrade. With this urgent new national commitment in mind, and recognizing that renewable energy use has historically been GSA's fastest and most cost-effective method for cutting GHG emissions, in FY 2016 GSA committed to increasing its renewable power use from 46 percent in FY 2016 to 100 percent, with the following interim targets:

FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25 & beyond
46%	52%	58%	64%	70%	76%	82%	88%	94%	100%

To meet these targets, GSA will continue to install on-site renewable energy generation and to incentivize new renewable generation by utility companies with purchases of grid-supplied renewable energy, stand-alone renewable energy credits (RECs), and energy produced by specific off-site renewable energy projects. Like all

long-term goals, this goal assumes a level of stability and predictability in relevant markets that cannot be guaranteed with certainty, and so may be revisited in the future in the event of dramatic and unexpected changes to budgetary or financial conditions.

Clean & Renewable Energy Initiatives

On-Site Renewables

Photovoltaic and other renewable energy sources, located on dozens of GSA properties, supply over 25,960 MWh of electricity annually, with more coming online every year. GSA is aggressively pursuing financing options including ESPCs and Power Purchase Agreements (PPAs) to expand its on-site renewable generating capacity.

Competitive Renewable Power Buying

In states with competitive electricity markets, GSA purchases additional renewable power through competitive electricity procurements. GSA assists Federal agencies with electricity procurements that specify a percentage of renewable power.

RECs and REC Swaps

GSA purchases renewable energy credits to supplement on-site and competitive renewable power procurements. GSA continually monitors renewable power markets. In many cases, GSA is able to cost-effectively "swap" on-site renewable energy generation for a larger quantity of off-site renewable energy, while helping other entities meet local mandates.[5]

Demand Response

Since 2011, GSA earned over $1.1 million in rebates from utility demand response programs. Under these programs, GSA reduces electricity consumption at peak load times, reducing the risk of blackouts and the need for utilities to build less-efficient "peaker" power plants. GSA reinvests its demand response rebates in energy and water savings projects, adding to the environmental benefits and taxpayer savings. GSA will continue to monitor the regulatory landscape affecting demand response programs nationally and will participate in such programs where practicable.

Off-Site Wind and Solar Power Procurement

In October 2014, GSA announced a first-of-its-kind contract to buy 140 MW of wind power from a wind farm currently in development in northwest Illinois. This procurement, if completed, would be the largest wind energy purchase from a single source in Federal contracting history.

GSA has also signed two contracts for output from a 6 MW solar array and a 75 MW solar array located on the Eastern Shore of Maryland. Construction is tentatively scheduled to begin in May and go online by the end of the year. GSA is assisting in investing in a cleaner power grid through these energy procurements. GSA will not, however, own the renewable attributes from the solar arrays.

Goal 4: Water Use Efficiency & Management

GSA is committed to reducing water use in its facilities and capturing and reusing water where possible. From 2007–2015, GSA reduced its water use intensity (gallons per square foot) by nearly 30 percent. As with energy efficiency, water efficiency creates significant savings for GSA. GSA has avoided over 2.78 billion gallons of

[5] State renewable energy portfolio standard legislation may potentially affect the reporting of renewable energy. GSA is exploring opportunities to resolve this issue.

water use since 2007 by increasing efficiency and would have paid $10.6 million more for water in FY 2015 if water intensity were still at 2007 levels.

Nevertheless, water remains one of GSA's greatest long-term challenges, especially in the western United States. The drought in 2015 led to new demands for even greater water reduction. GSA is responding to these pressures with a range of short-term to long-term conservation measures.

Drought-tolerant landscaping

GSA is assessing greenscapes in western states and replacing them with drought-tolerant landscaping, including xeriscaping, as funds become available. Xeriscaping is a type of landscaping that uses drought tolerant plants to reduce the need for supplemental watering. GSA is also actively planning and assessing future xeriscaping strategies. At the Fort Worth Federal Center, GSA is collaborating with a non-profit to use test plots to determine the best combinations of plants that are water-reducing, pollinators, native, and aesthetically pleasing.

Detecting leaks through advanced metering

GSA is installing advanced water meters when feasible and has seen great success with improving water efficiency through leak detection and corrective actions. To date, GSA installed advanced water meters in 277 buildings, representing 47.7 percent of annual water consumption. GSA has uncovered significant savings by utilizing advanced water meters to detect leaks. As an example, in one Federal Building, metering trends revealed that site's water consumption was not returning to zero overnight. It was discovered that a sprinkler valve was leaking. About 12,000 gallons were lost, but the amount would have been significantly higher had it not been caught until the next water bill was received.

Storm-water management and reuse

GSA's planning process requires consideration of storm water management and reuse. These efforts have increased the use of planted roofs, rain gardens, non-potable irrigation, and reuse for toilet flushing and makeup water. Where feasible, GSA is also installing systems to capture and use condensate water from heating, ventilation, and air conditioning (HVAC) systems for irrigation and other non-potable uses.

Sustainable SITES Certification

PBS has recently adopted the SITES certification program and added it into the 2016 P-100 standards applicable to GSA capital projects. SITES certification is intended to improve project sustainability regarding site features, including civil engineering and landscape architecture, both during project development and during long-term facility operations and maintenance.

Similar to LEED certification for buildings, SITES offers an effective and efficient way to compel performance on various project types, encouraging long-term cost and maintenance efficiencies. SITES enumerates performance standards that allow for flexible tradeoffs during the design process, and includes third-party certification. SITES will be used in conjunction with LEED, encouraging higher sustainability and operating performance on site design, development, and maintenance beyond the building envelope. Relevant performance characteristics include factors that directly benefit the facility (e.g., lower irrigation water usage, reuse of existing site features and materials, enhanced storm water management, use of native plants) as well as those that have broader implications for sustainability (e.g., carbon sequestration, urban heat island, climate adaptation).

Performance Contracting

GSA is using ESPCs and Utility Energy Savings Contracts (UESCs) to fund cost-effective water efficiency projects where not feasible via capital budgets. A large multi-building ESPC project to be awarded by GSA's

Northeast and Caribbean Region is expected to reduce water consumption by 20 percent. Another ESPC project for four buildings in GSA's National Capital Region is expected to reduce water by 60 percent.

Goal 5: Fleet Management

GSA Internal Fleet

GSA maintains a fleet of approximately 967 vehicles for the use of GSA employees. While this fleet is small compared to the fleets GSA manages for other Federal agencies, it allows GSA to demonstrate leadership in fleet management and pilot innovative technologies and practices on a small scale.

GSA's top priorities for internal fleet management, for several years and continuing in 2016–17, are to eliminate unnecessary vehicles from the agency's fleet inventory and to increase the proportion of hybrid, electric, low-GHG, and other AFVs in our fleet.

Federal Fleet Offerings

GSA Fleet maintains the second largest non-tactical Federal fleet in the U.S. Government, with over 200,000 vehicles leased to over 55 Federal agency customers. GSA Fleet is committed to providing low-cost, high-efficiency vehicle options to its customer agencies in an effort to facilitate meeting their missions in the most sustainable manner possible.

Greening the Federal Fleet

GSA actively partners with vehicle providers and maintains an open contract solicitation in order to offer the widest possible array of alternative fuel and low-GHG vehicles and solutions, and introduce emerging technologies as soon as they become available. Currently, in addition to seeking fleet electrification and efficiency opportunities, GSA is working with manufacturers to encourage the reduction and elimination of all hydrofluorocarbon (HFC) refrigerants from vehicle air conditioning systems.

Zero Emission Vehicles

Executive Order 13693 requires 20 percent of agencies' new passenger vehicle acquisitions to be zero-emission or plug-in hybrid vehicles by 2020, and 50 percent by 2025. By leasing vehicles from GSA, agencies can benefit from predictable annual fleet expenditures without the need for significant up-front and periodic capital outlays for vehicle acquisitions, which is helpful when integrating these more costly vehicles into a fleet. GSA Fleet currently provides zero-emission and plug-in hybrid vehicles to customers and continues to work with original equipment manufacturers and third-party vendors to drive down acquisition prices and increase offerings. In addition, GSA reintroduced the Full Rate Replacement program that allows customers to spread the incremental cost of a replacement vehicle over the vehicle's monthly lease rates and generates enough funds to cover a replacement zero-emission vehicle in the future, without one-time incremental costs. GSA continues to make accessibility and affordability of zero-emission and plug-in hybrid vehicles a priority.

Electric Vehicle Charging Stations

In FY 2016, GSA is offering a streamlined and cost-effective procurement option for customers to buy level II electric vehicle charging stations for Government fleet vehicles through an existing blanket purchase agreement (BPA). GSA has also posted a request for information to vendors, seeking more information on level II charging infrastructure to develop future comprehensive and cost effective contract solutions. Finally, GSA is also exploring the potential to add lease agreements for charging stations to existing contracts between GSA's Public Buildings Service and public utility companies. This is a logical extension of those agreements since the utility companies possess expertise and resources in this sector of the energy market.

Car Sharing

Last year, GSA piloted car-sharing models across the Federal fleet that utilize a commercial product that allows customers to reserve vehicles by the hour. The pilot concluded that car sharing may help agencies save money by supplementing their motor vehicle fleets with an alternative local mode of transportation. GSA has a blanket purchase agreement available for customer agencies Government-wide to procure car sharing services.

Telematics

EO 13693 requires agencies to acquire telematic devices on light-duty and medium-duty vehicles where appropriate. “Telematics” is broadly defined as technology that combines telecommunications and information processing to send, receive, and store data related to remote objects, such as vehicles. GSA offers both aftermarket and OEM-provided telematic solutions helping agencies to meet this requirement.

Dispatch Reservation Module

Almost in its third year, GSA’s Dispatch Reservation Module (DRM) is a popular car sharing option that allows customers to build reservable vehicle motor pools that combine their existing GSA-leased and agency-owned vehicles. DRM allows drivers to make vehicle reservations through an online scheduling tool, track vehicle dispatches, and produce online reports to aid in fleet management decisions. Since its inception in 2014, over 55,000 reservations have been made for almost 14,000 vehicles.

GSA Short Term Rental Program

The Short Term Rental (STR) program assists Federal agencies with short-term rental needs for vehicles and equipment and reduces redundant procurement support across agencies. The STR program provides agencies with an option to manage their fleet utilization by removing vehicles or equipment in their owned or leased fleets and by renting vehicles that are needed only on a short-term or one-time basis.

Goal 6: Sustainable Acquisition

GSA offers a wide variety of product and services contracts, policy support, and information services to help Federal agencies meet their sustainability goals.

Product and Services Contracts

GSA offers sustainable products and services through a variety of Government-wide procurement solutions. Through the GSA Advantage! web site alone, agencies purchased more than $36 million worth of sustainable products in 2015. GSA reviews each of its contract vehicles as they are awarded and renewed to ensure their support for statutory and Executive Order sustainability mandates. Then, wherever possible, we add cost-effective features to ensure that acquiring green products and services through GSA is as easy as possible. In addition to the existing strategic sourcing contract vehicles, GSA is awarding Building Maintenance and Operations (BMO) Services contracts that include green product requirements.

The table below shows GSA’s 2015 sales of sustainable products through the strategic sourcing vehicles.

Strategic Sourcing Vehicle	FY 2015 Sustainable Product Sales
Janitorial and Sanitation (JanSan)	$2.6 million
Maintenance, Repair and Operation Products (MRO)	$916,000
DDS3	$215.8 million
Print Management	$22.2 million

Office Supplies 3 IDIQ

The OS3 IDIQ contracts offer recycled content products such as paper and toner cartridges. OS3 contractors report green product sales at the line-item level so agencies can gauge their green-purchasing performance.

Janitorial and Sanitation (JanSan) BPAs

The JanSan BPAs offer products such as bio-based cleaning products and recycled content tissue and towel products. JanSan also offers agencies an opportunity to meet the new EO 13693 requirement to set targets for purchasing only bio-based products.

Maintenance, Repair, and Operation Products BPAs

The MRO BPAs offer a wide range of green products such as bio-based and recycled content paints, WaterSense sink fixtures, and Energy Star room air conditioners. MRO also offers Federal agencies an opportunity to meet the new EO 13693 requirement to set targets for purchasing only bio-based products.

Print Management BPAs

GSA's Print Management BPAs offer access to Energy Star and EPEAT-registered imaging devices and maintenance contracts. Service contractors are required to set cost-saving, green features such as double-sided and black and white printing by default.

Package Delivery

Agencies using the freight services providers through GSA's Multiple Award Schedule 48 can help reduce air pollution and greenhouse gas emissions by choosing providers that are members of EPA's SmartWay Transport Partnership. In 2015, agencies purchased slightly more than $15 million worth of freight services from these companies.

GSA's 2014 Domestic Delivery Services 3 (DDS3) package delivery contract was the first strategic sourcing contract in the Federal Government to evaluate and consider the carbon footprint of services proposed. In addition to providing cost-effective delivery services, DDS3 helps agencies manage the carbon footprint of their shipping by requiring contractors to report shipping GHG emissions at the customer agency level.

Laptops and Desktops

In FY 2015, the Office of Federal Procurement Policy and the Federal Chief Information Officer issued a policy memorandum requiring that 80 percent of agency purchases of laptops and desktops meet standard configurations that include Energy Star and EPEAT at the Gold level. The policy memo also prohibits the issuance of new solicitations for laptops and desktops and requires civilian agencies to purchase these products from GSA's Multiple Award Schedule 70, NASA's Solutions for Enterprise-Wide Procurement (SEWP) Government-Wide Acquisition Contract (GWAC), or the National Institute of Health's Chief Information Officer-Commodities and Solutions (CIO-CS) GWAC. GSA offers products that meet the standard configurations through Schedule 70's Special Item Numbers (SINs) 132-8 (Purchase of Hardware) and 132-12 (Maintenance and Repair Parts/Service for Hardware).

Furniture

Also as part of strategic sourcing, GSA led an interagency effort to develop an Office Furniture Ordering Guide. The primary stated goal of the Ordering Guide is to reduce the overall costs associated with Federal office furniture purchases. The potential cost savings to taxpayers is between $29 million to $55 million annually. The Ordering Guide requires all furniture to meet the multi-attribute rating system developed by the Business and Institutional Furniture Manufacturers Association (BIFMA) or indoor air quality requirements, as certified by GREENGUARD or SCS Indoor Advantage.

GSA Multiple Award Schedules

GSA's Multiple Award Schedules Program is exploring ways to enable agencies to meet the Government-wide requirements for sustainable acquisitions. Ten Schedules mandate sustainable attributes for all products awarded on contract (e.g. appliances and imaging equipment must be Energy Star). In addition, SINs within more than a dozen schedules now contain notes identifying where products meeting environmental attributes such as Energy Star, bio-based content, or EPA's SmartWay Transport Program might be available.

Transactional Data

GSA has proposed a revision to the GSA Acquisition Regulation (GSAR) to include clauses that would require vendors to report transactional data from orders placed against GSA's indefinite-delivery, indefinite-quantity contracts. GSA will monitor the transactional data for opportunities to improve GSA's sustainable acquisition purchasing program.

Ecolabels Implementation

GSA is updating the icons used to identify environmental products on GSA Advantage!, Global Supply and other communication and ordering platforms to align with the purchasing requirements of EO 13693. Icons will be added for EPA's Safer Choice and for the non-Federal specifications, standards, and ecolabels recommended by EPA.

Supply Chain GHG Management

From 2009–2015, GSA pioneered the inclusion of Supply Chain GHG management in Federal contracts under EO 13514. Now that it is required of other large purchasing agencies under EO 13693, GSA is ready to help by offering access to its contracts and sharing its experience in developing the most advanced contractual GHG management features in the Federal Government.

Package Delivery

GSA's 2014 Domestic Delivery Services 3 (DDS3) package delivery contract was the first strategic sourcing contract in the Federal Government to evaluate and consider the carbon footprint of services proposed. In addition to providing cost-effective delivery services, DDS3 helps agencies manage the carbon footprint of their shipping by requiring contractors to report shipping GHG emissions at the customer agency level.

Future Initiatives

GSA has identified potential GHG management features for its next-generation Alliant 2 (IT services), NS2020/EIS (telecom services), and Human Capital and Training Solutions (HCaTS) strategic sourcing contracts, which are slated for award in 2016 or later. GSA is also working to include GHG management features in facilities design and construction contracts, such as by researching the GHG impact of alternative building designs and asking contractors to track and reduce job-site GHG emissions.

Policy Support and Information Services

Beyond product and services contracts, GSA supports agencies' sustainability goals through information services and policy support.

Green Procurement Compilation

The Green Procurement Compilation (GPC) is a comprehensive sustainable acquisition resource for Federal purchasers. It consolidates and organizes information from multiple Federal environmental programs in one place, allowing easy identification of all Federal green purchasing requirements for a given product or service. The GPC also provides sample solicitation language for both products and services, and optional green practices for services contracts. Links are included to purchase compliant products and services from Government-wide sources such as GSA Advantage, GSA Schedules, and Federal Strategic Sourcing Initiative (FSSI) solutions. Agencies are able to create GPC pages for agency-specific product requirements, with the

Departments of Defense and Energy and GSA's Public Buildings Service leading the way. GSA continuously updates the GPC, and in 2016, added EPA's interim recommendations for third party standards and ecolabels and updating the references to the Guiding Principles for Sustainable Federal Buildings. GSA is collaborating with EPA to link the GPC with commercially available contract writing systems through an application programming interface.

Acquisition Gateway

The Acquisition Gateway is a shared workspace designed to improve access to knowledge and expertise about Federal purchasing and acquisition. In 2015 and 2016, GSA posted sustainable acquisition expert articles, tools, and resources in nearly a dozen hallways within the Gateway. In 2016 and 2017, GSA will link the Gateway to the Green Procurement Compilation, add sustainable acquisition resources to the Statement of Work Library, and continue to post or encourage our partner agencies to post sustainable acquisition articles and resources.

Sustainable Acquisition Training Webinars

As part of an annual series of Multiple Award Schedules webinars, GSA offers a course entitled "How to Integrate "Green" into Contracts" two or three times per year, and will continue to do so in future years. GSA also maintains an on-line version of this course through the Defense Acquisition University web site.

Acquisition Policy

GSA supports sustainable acquisition Government-wide through numerous policy initiatives, such as:

- Co-chairing several interagency working groups established by the White House Council on Environmental Quality, including the Sustainable Acquisition and Materials Management Working Group and Supply Chain GHG Emissions Working Group
- Supporting Environmental Protection Agency efforts to develop policy for Government use of third-party standards and ecolabels, and incorporating the results into GSA's contract and information offerings, including the Green Procurement Compilation
- Participating in the development of NSF 391.1, a voluntary consensus, multi-attribute, life cycle sustainability standard for professional services
- Creating the new SFTool Verifying Delivery of Sustainable Products and Services module that provides guidance to the acquisition workforce on how to verify contractor compliance with sustainability requirements
- Providing Sustainability Coding Guidelines to ensure accurate use of the Federal Procurement Data System (FPDS) environmental attribute data elements to track sustainable purchasing Government-wide

Internal Initiatives

GSA has internal initiatives in place in 2016 to improve sustainable acquisition within our agency. The Public Buildings Service's Key Sustainable Products initiative focuses on 10 of the highest-volume, highest-impact product types purchased and sets high sustainability standards for those product types; in Q3Q4 of FY15, 50 percent of all relevant PBS contract actions used these standards. In addition, GSA will continue building and updating a comprehensive sustainable acquisition section on the GSA Acquisition Portal to provide our acquisition workforce with sustainable acquisition tools and guidance. GSA also recently finalized a new internal sustainable acquisition policy (GSAM Subpart 523.1) and provided training for our workforce on the new policy.

Goal 7: Pollution Prevention & Waste Reduction

Waste Diversion

In 2015, GSA diverted 53 percent of its non-hazardous municipal solid waste away from landfills through its recycling and composting programs, including composting 2,686 tons of organic waste from 56 facilities across the country.[6] Through negotiated recycling sales contracts, GSA collected and distributed over $200,000 of recycling revenue to Federal tenant agencies and GSA's Child Care Tuition Assistance Program.

GSA expanded its nationwide Construction and Demolition (C&D) waste diversion tracking system to also support small (sub-prospectus, or under $2.85M) projects. GSA's prospectus-level projects completed in 2015 diverted 67 percent of construction & demolition debris. GSA continues to gather available C&D waste diversion data on completed prospectus projects, and now also on completed small projects above $25,000 in every Region. GSA expects to continue exceeding the Government-wide 50 percent waste diversion goal.

GSAXcess

GSAXcess supports the second step in the "Reduce, Reuse, Recycle" waste management hierarchy with a system for agencies to offer and acquire excess and surplus personal property like furniture, motor vehicles, computers, and other equipment. Property can be reused internally or transferred to other Federal agencies, state and local agencies, and qualified non-Federal organizations. In 2015 alone, GSAXcess enabled the reuse within the Federal community of over 28,000 line items worth more than $426 million, giving this property new life and stretching taxpayer dollars. GSAXcess also enabled the reuse of over 27,000 line items worth more than $522 million to state and local agencies and eligible non-Federal organizations.

Goal 8: Energy Performance Contracts

To reduce energy and water use via building upgrades that are life-cycle cost-effective—but beyond currently limited capital budgets—GSA is using performance contracting methods, including ESPCs and UESCs. These contracts leverage private-sector financing for upfront project costs, and are paid for using funds previously budgeted to pay for utility bills (i.e., some of the savings in energy and water costs generated by the upgrade are used to pay for the upgrade over time). GSA can thus reduce energy and water use at no upfront cost, and still reap significant savings.

As part of the President's Performance Contracting Challenge (PPCC), GSA committed to awarding a total of $344.5 million in ESPCs and UESCs by December 2016. As of June 30, 2016, GSA had already exceeded this goal, with total awards of $491 million. GSA is also providing assistance and expertise to help other agencies maximize their use of energy performance contracts.

Deep Energy Retrofits

GSA is using performance contracts to perform deep energy retrofits,[7] pushing for greater energy savings wherever possible. The first 10 projects awarded under GSA's National Deep Energy Retrofit program identified, on average, over 38 percent energy savings.

Goal 9: Electronics Stewardship & Data Centers

Information Technology products contribute significantly to GSA's energy and waste footprints. Tenant agencies operate over 8 million square feet of data centers in space leased from GSA, contributing significantly to energy use in GSA-managed buildings. GSA also offers energy efficient electronics to Federal agencies, provides responsible and cost-effective solutions for their disposal, develops Government-wide e-waste policy, and provides solutions for transitioning data management and computing services to the Cloud.

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[6] GSA tracks diversion of municipal solid waste from GSA-owned buildings.
[7] Deep energy retrofits take a whole-building approach to analyze and update multiple interacting building systems, as opposed to more traditional energy retrofits that focus on one or a few systems in isolation.

Internal Policies

Acquisition

GSA's internal policy is to purchase only electronic products that are Federal Energy Management Program (FEMP)-designated, Energy Star qualified, and/or meet the Electronic Product Environmental Assessment Tool (EPEAT) Silver or Gold standard.

Management

Since FY 2007, and continuing in 2016, 100 percent of GSA's computers were power-management enabled. GSA has eliminated nearly all use of personal printers, and shared printers are set to print double-sided and black-and-white by default.

Reuse and End-of-life

GSA is a member of the United States Post Office (USPS) Blue Earth initiative to assist offices with disposing of used electronics in an environmentally sustainable manner. The USPS picks up unneeded electronics from registered users and delivers them to a certified recycling facility at no cost to the agency. In FY 2016, all GSA e-waste was disposed of using Blue Earth, GSAXcess, Computers for Learning, UNICOR, or an R2 or E-stewards certified private recycler.

Data Centers

In accordance with recent Federal Data Center Consolidation Initiative Program Management Office guidance, GSA IT has identified 3 of 125 data centers as "core" data centers. Of its 122 non-core data centers, 66.3 percent (81 data centers) are slated to be closed, which exceeds OMB's Government-wide goal of 40 percent by FY 2015.

Policy Support and Information Services

In support of the National Strategy for Electronics Stewardship, GSA will release a Government-wide e-waste regulation for review and interagency comment by the end of calendar 2016. GSA will then develop training and outreach materials, and is exploring new contract offerings to help Federal agencies comply with the regulation.

GSA offers several options for agencies to manage their e-waste, including GSAXcess (discussed above under Pollution Prevention and Waste Reduction) and the Computers for Learning donation program. The Agency Asset Management System (AAMS) allows Federal agencies to easily transfer used electronics within their own agencies before offering them to other agencies. This tool improves information sharing on used electronics and increases the reuse of equipment within agencies.

Goal 10: Climate Change Resilience

In 2013, the U.S. Government Accountability Office (GAO) identified climate change as a high fiscal risk. To manage this risk, GSA continues an Incremental, Iterative, and Integrated (I^3) approach to climate change risk management by building capacity through climate literacy and organizational learning within the agency's business models. Working within an enterprise risk management framework that considers all of the risks and opportunities of incremental climate change and variability, GSA pilots tailored organizational adaptation and collaboration methods, shares lessons learned within and outside of GSA, builds capacity in the capital real estate and acquisition programs, and refines our adaptation activities based on the knowledge gained from these experiences.

GSA developed its first vulnerability analysis regarding incremental climate change in 2011, and, since then, has implemented and updated, as necessary, a Climate Change Risk Management (CCRM) plan. The CCRM actions are flexible and increase GSA's agility to respond to the emergent nature of climate risk management.

The flexibility allows the agency to include the evolving science and demographics information in various time and spatial scales, adjustments in the overall Federal Government response, and agency leadership and process changes. The actions align with GSA's strategic goals through awareness, responsiveness, and collaboration with customers and industry. For example, in collaboration with agency partners, GSA identified telecommunications and data centers as two mission critical infrastructures vulnerable to climate change. In 2014, GSA contracted for a literature search of telecom and data center risk and adaptation actions. GSA also developed regional fact sheets about the risks to telecom and data centers, which are being shared with customers and vendors. These fact sheets and a related expert article have been posted in the Telecommunications hallway in the Acquisition Gateway.

In 2015, GSA added targeted climate change adaptation and related scientific support services to our professional services offerings.

Additional details on these accomplishments and many others are available in GSA's Climate Change Risk Management Plan. GSA will continually monitor and evaluate progress towards implementing the actions outlined in this plan and will make adjustments as necessary.

Progress on Administration Priorities

GSA has taken multiple steps in meeting progress milestone and key strategies related to the following areas:

President's Performance Contracting Challenge (PPCC):

- GSA's PPCC commitment was $344.5 million in contracts awarded by the end of calendar 2016.
- To date (June 30, 2016), GSA has awarded $491.0 million.
- GSA will award a minimum of $21 million in performance contracts in FY17 and $50 million in FY18.

Because GSA far exceeded its new award targets in FY16, it will reduce its pace of new awards slightly for FY17 to focus on ensuring a robust measurement & verification (M&V) program for existing projects and developing the ESPC ENABLE streamlined ESPC contracting program, in collaboration with FEMP and GSA Federal Supply Schedule 84.

Electric and Zero Emission Vehicles:

- In FY 2015 and 2016, GSA's internal fleet conducted a Vehicle Allocation Methodology (VAM), to establish an optimal fleet plan to include zero-emission and/or plug-in hybrid vehicles. GSA will maintain and/or increase the proportion of these vehicles to attain the optimal fleet composition. Preliminary VAM results suggest GSA has the potential to increase its fleet's share of zero emission (ZEV) or plug-in hybrid vehicles by approximately 5 percent in FY 2016-2017.
- GSA internal fleet participated in both GSA Fleet EV pilots and plans to continue to actively participate in any future new vehicle technology pilots. Additionally, GSA internal fleet will research the possibility of using the existing 168 charging stations at Federal agency sites across the United States when there is no GSA internal infrastructure available.
- In FY 2017, GSA will award a government-wide charging station infrastructure BPA.

Climate Preparedness and Resilience:

- GSA continues to use climate change risk management to screen its Capital Investment Program and has updated and rolled out its fiscal year 2016 P-100 facilities standard to include climate change risk

management. GSA will review and revise as needed to reflect latest the climate science and methodologies in the P100 annual update.

- GSA is developing a decision-making framework to assist GSA customers to identify and manage climate-related risks for their supply chains. GSA will post the new framework to the SFTool by August 31, 2016 and present to relevant agency adaptation groups during the first three quarters of fiscal year 2017.
- GSA will continue requiring contractors for select procurements to address climate change risk management planning as a contract deliverable. GSA will support delivery of projects where climate impacts are relevant. The support is tailored to customer mission, budget, project phase, and location. GSA will review and revise as needed to reflect latest the climate science and methodologies in the P100 annual update.

Size & Scope of Agency Operations

Agency Size and Scope	FY 2014	FY 2015
Total Number of Employees as Reported in the President's Budget	11,502	11,131
Total Acres of Land Managed	15,928	15,163
Total Number of Buildings Owned	1,574	1,621
Total Number of Buildings with GSA Leases	7,147	7,171
Total Building Gross Square Feet (GSF)	423,132,651	420,889,014
Operates in Number of Locations Throughout U.S.	8,721	8,792
Operates in Number of Locations Outside of U.S.	0	0
Total Number of Fleet Vehicles Owned	0	0
Total Number of Fleet Vehicles Leased	1,005	967
Total Number of Exempted-Fleet Vehicles (Tactical, Law Enforcement, Emergency, Etc.)	125	86
Total Amount Contracts Awarded as Reported in FPDS ($Millions)	9,095	9,266

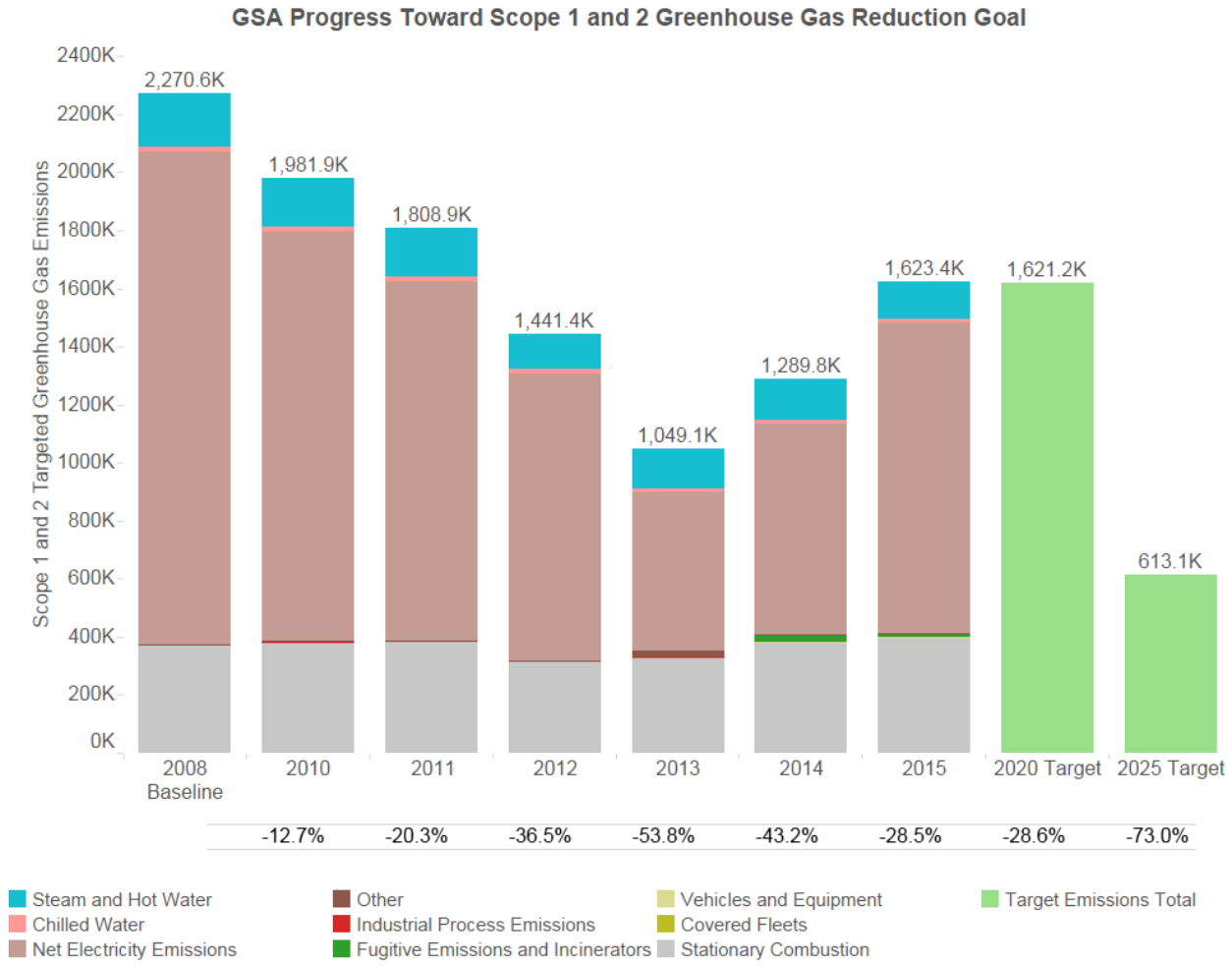
Agency Progress and Strategies to Meet Federal Sustainability Goals

This section provides an overview of progress through FY 2015 on sustainability goals contained in Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, and agency strategies to meet the new and updated goals established by Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*.

Goal 1: Greenhouse Gas (GHG) Reduction

Scope 1 & 2 GHG Reduction Goal

EO 13693 requires each agency to establish a Scope 1 & 2 GHG emissions reduction target to be achieved by FY 2025 compared to a 2008 baseline. GSA's 2025 Scope 1 & 2 GHG reduction target is 73 percent.



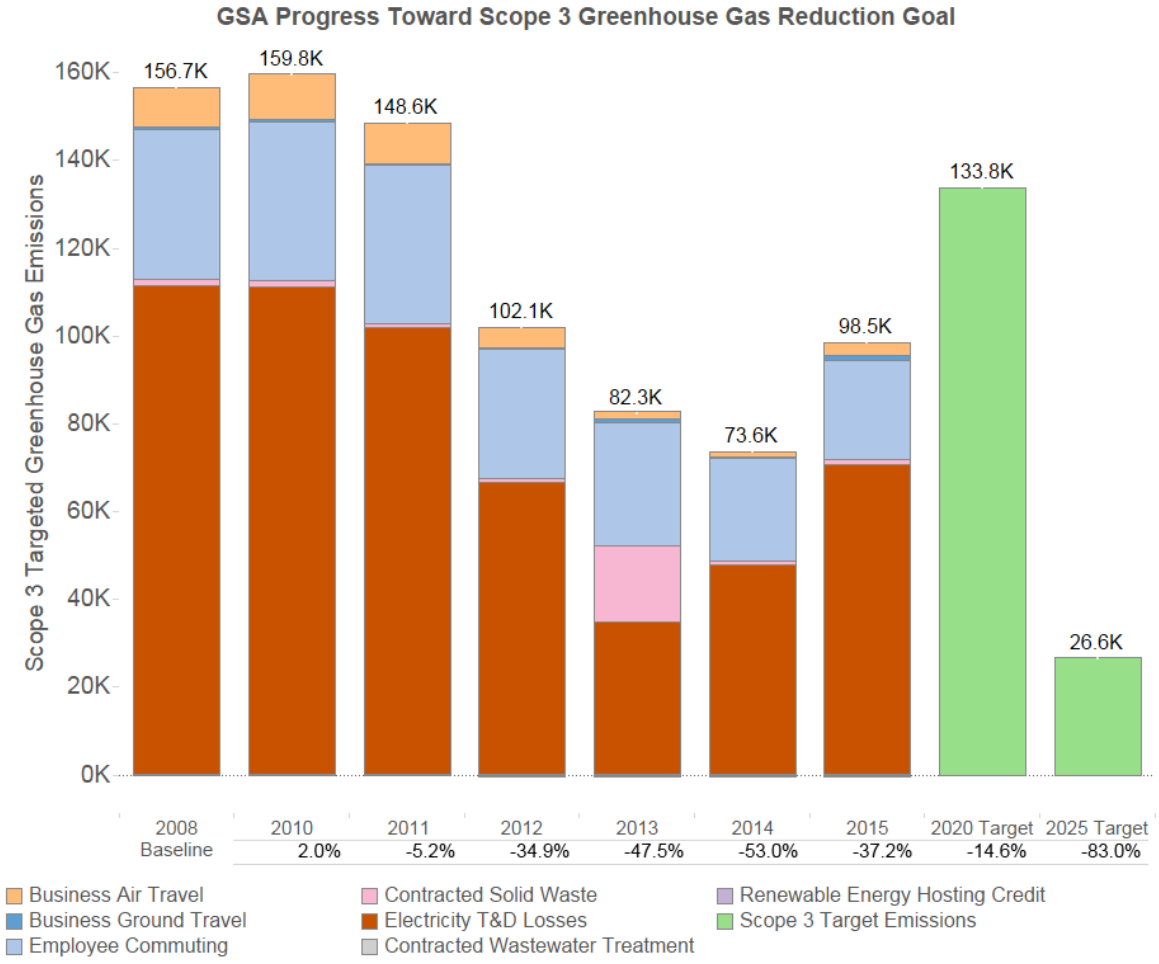
Scope 1 & 2 GHG Reduction Strategies:

Strategy	Strategy Priority for FY 2017	Strategy Narrative	Targets and Metrics
Use the Federal Energy Management Program (FEMP) GHG emission report to identify/target high emission categories and implement specific actions to address high emission areas identified.	Yes	Building energy use is GSA's largest emissions category, with subcategories being electricity, natural gas, steam, chilled water, and heating oil. GSA prioritizes strategies to reduce emissions in each of these categories roughly in order of their scale.	GSA will meet agency-level annual and FY25 targets for Scope 1 and 2 GHG reduction, as set forth in this plan's Executive Summary.
Identify and support management practices or training programs that encourage employee engagement in addressing GHG reduction.	No	GSA uses this strategy but not among top five priorities. GSA benefits from a strong base of employee expertise in sustainability, including related to critical GHG reduction opportunities such as high performance green buildings and renewable energy. GSA incorporates GHG reduction strategies in standard policy and training for all employees, such as the P100 building standards.	
Determine unsuccessful programs or measures to be discontinued to better allocate agency resources.	Yes	GSA reviews program accomplishments and resource allocations annually or more frequently. In FY16, GSA made the decision to scale back its under-utilized Carbon Footprint Tool program and is conducting a comparative study of the success of operational and capital-based energy efficiency measures.	GSA will meet agency-level annual and FY25 targets for Scope 1 and 2 GHG reduction, as set forth in this plan's Executive Summary.
Given agency performance to date, determine whether current agency GHG target should be revised to a more aggressive/ambitious target.	Yes	In FY 2016, GSA increased its FY 2025 targets for renewable energy, Scope 1 and 2 GHG, and Scope 3 GHG as set forth in this plan's Executive Summary.	New targets are set forth in appropriate sections of this Plan.
Employ operations and management (O&M) best practices for emission generating and energy consuming equipment.	Yes	In FY 2016, GSA will continue to conduct building operation audits using Rapid Building Assessments and metering technology and implement identified energy conservation measures that can be achieved through operations and maintenance practices. Practices such as reducing nighttime base load of buildings, reducing external nighttime lighting, and validating temperature set points	Energy savings from each measure will be tracked and will contribute to GSA's Energy Use Intensity (EUI) reduction target of 47.5 percent below 2003 levels by 2025.

		will be implemented inventory-wide.	
Identify additional sources of data or analysis with the potential to support GHG reduction goals.	Yes	GSA monitors and analyzes building and facility energy use data through a variety of systems and practices including building automation systems, advanced meters, Energy Use Analysis System, national and regional building level dashboards, monthly regional energy progress report, and GSAlink.	GSA will continue to monitor and analyze existing and potential additional sources of data.

Scope 3 GHG Reduction Goal:

EO 13693 requires each agency to establish a Scope 3 GHG emission reduction target to be achieved by FY 2025 compared to a 2008 baseline. GSA's 2025 Scope 3 GHG reduction target is 83 percent.



Scope 3 GHG Reduction Strategies:

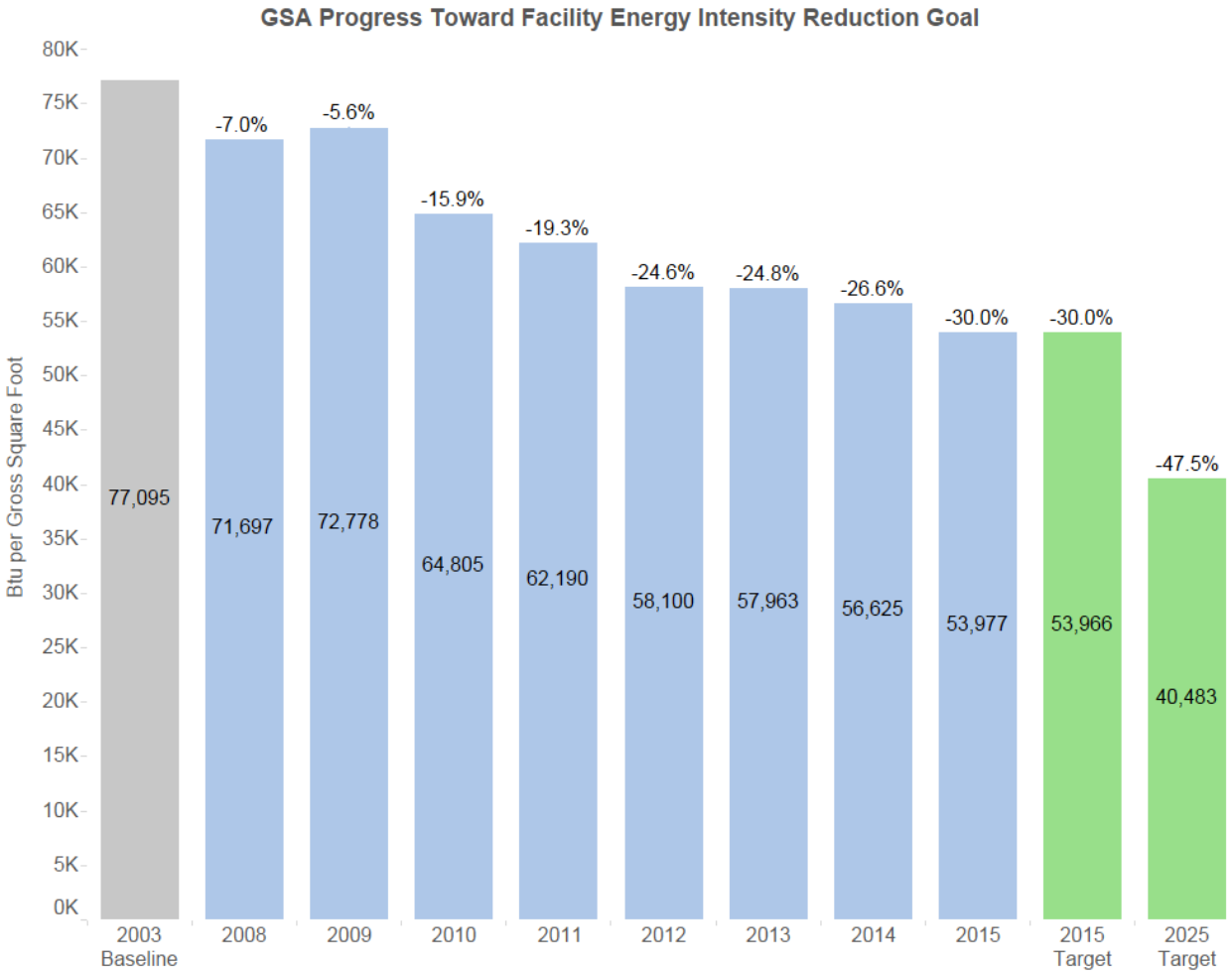
Strategy	Strategy Priority for FY 2017	Strategy Narrative	Targets and Metrics
Reduce employee business ground travel.	No	GSA has reduced ground travel emissions by approximately 59 percent since FY 2008 and these emissions were approximately 1 percent of GSA's FY 2015 Scope 3 GHG emissions. Further reductions in travel would impede core agency functions such as project supervision and management.	
Reduce employee business air travel.	No	GSA has reduced air travel emissions by approximately 67 percent since FY 2008 and these emissions were approximately 3 percent of GSA's FY 2015 Scope 3 GHG emissions. Further reductions in travel would impede core agency functions such as project supervision and management.	
Develop and deploy an employee commuter emissions reduction plan.	Yes	Employee commuting accounted for almost 23 percent of GSA's FY 2015 Scope 3 GHG emissions, making it the second-largest single category after electric T&D losses.	GSA will meet or surpass agency-level annual and FY 2025 targets for Scope 3 GHG reduction, as set forth in this plan's Executive Summary. GSA has developed an initial multimodal access plan (MAP), attached as an appendix to this Plan, and will revise and expand it in FY 2017.
Use an employee commuting survey to identify opportunities and strategies for reducing commuter emissions.	Yes	See response under "develop and deploy employee commuter reduction plan" above.	GSA will meet or surpass agency-level annual and FY 2025 targets for Scope 3 GHG reduction, as set forth in this plan's Executive Summary. GSA's commuter survey data will be used to inform MAP development.
Increase & track number of employees eligible for telework and/or the total number of days teleworked.	Yes	GSA strongly encourages telework for its own employees and provides flexible workspace and technology	GSA will meet or surpass agency-level annual and FY 2025 targets for Scope 3 GHG reduction, as set forth in this plan's Executive Summary.

		solutions to enable increased telework for other agencies.	
Develop and implement a program to support alternative/zero emissions commuting methods and provide necessary infrastructure.	Yes	See response under “develop and deploy employee commuter reduction plan” above.	See response under “develop and deploy employee commuter reduction plan” above.
Establish policies and programs to facilitate workplace charging for employee electric vehicles.	Yes	GSA is updating its interim policy on electric vehicle charging to allow Federal employees and others, who are authorized by the Federal agency to use its parking facility, the ability to charge their privately owned electric vehicles at the workplace.	GSA plans to issue its policy in Q4 of FY16.
Include requirements for building lessor disclosure of carbon emission or energy consumption data and report Scope 3 GHG emissions for leases over 10,000 rentable square feet.	No	GSA uses this strategy but not among top five priorities. GSA has included such reporting requirements in new leases for several years and is now focused on activating these provisions and build-out of associated data reporting infrastructure. In Fall 2016, GSA will provide agencies with FY 2016 Scope 3 GHG emissions data for GSA-managed space (both GSA-owned and commercially leased).	
Purchase grid-supplied renewable electricity to reduce Scope 3 emissions from transmission and distribution (T&D) losses	Yes	In FY 2016, GSA increased its FY 2025 targets for renewable energy, Scope 1 and 2 GHG, and Scope 3 GHG as set forth in this plan’s Executive Summary.	Targets are set forth in this plan’s Executive Summary.
Increase municipal solid waste diversion	Yes	In FY 2015, GSA will continue to improve tracking and reduction of MSW disposal including recycling and composting.	GSA will meet or surpass agency-level annual and FY 2025 targets for Scope 3 GHG reduction, as set forth in this plan’s Executive Summary. GSA will also meet or surpass EO 13693 annual targets for waste diversion.

Goal 2: Sustainable Buildings

Building Energy Conservation Goal:

The Energy Independence and Security Act of 2007 (EISA) requires each agency to reduce energy intensity 30 percent by FY 2015 as compared to FY 2003 baseline. Section 3(a) of EO 13693 requires agencies to promote building energy conservation, efficiency, and management and reduce building energy intensity by 2.5 percent annually through the end of FY 2025, relative to a FY 2015 baseline and taking into account agency progress to date, except where revised pursuant to Section 9(f) of EO 13693.



Building Energy Conservation Strategies:

Strategy	Strategy Priority for FY 2017	Strategy Narrative	Targets and Metrics
Make energy efficiency investments in agency buildings.	Yes	GSA's Energy and Water Conservation Measures Program is designed to reduce on-site energy and water consumption through building alteration projects or retrofits of existing building systems.	GSA will meet EO 13693's annual quantitative targets for energy use intensity.
Use remote building energy performance assessment auditing technology	Yes	The Energy Independence and Security Act (EISA) sec. 432 requires GSA to identify facilities responsible for 75 percent of portfolio energy use and audit 25 percent of them each year to identify cost-effective efficiency measures. Rapid Building Assessment technology allows GSA to evaluate facilities at a fraction of the price of a traditional audit. GSA was the first agency to implement this strategy in 2013.	GSA will meet EO 13693's annual quantitative targets for energy use intensity.
Participate in demand management programs.	No	GSA uses this strategy but not among top four priorities. GSA actively participates in programs offered by ISO and Utilities to effectively manage utility costs and monitors progress when able via advanced metering.	
Incorporate Green Button data access system into reporting, data analytics, and automation processes.	No	GSA uses this strategy but not among top four priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	
Redesign interior space to reduce energy use through daylighting, space optimization, and sensors and control systems.	No	GSA uses this strategy but not among top four priorities. GSA includes these strategies in its P100 building standards.	
Identify opportunities to transition test-bed technologies to achieve energy reduction goals.	No	GSA uses this strategy but not among top four priorities. GSA's Green Proving Ground (GPG) program evaluates pre- and early-commercial stage building technologies, accelerating the transition from bench-scale technology to commercial viability. Seven GPG-evaluated technologies have been or will be deployed in over 200 GSA-owned Federal buildings.	
Follow city energy performance benchmarking and reporting requirements.	No	GSA uses this strategy but not among top four priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	

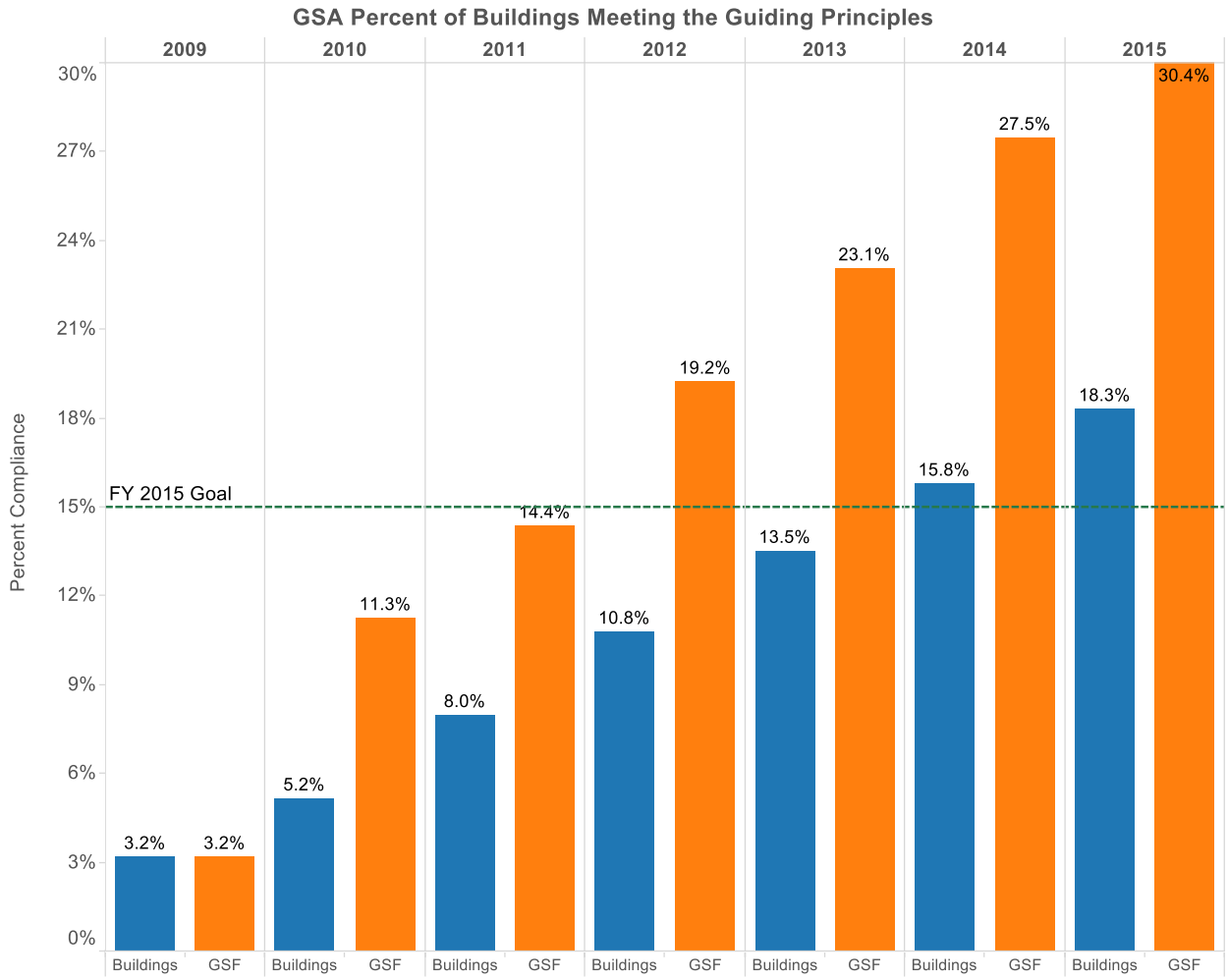
Install and monitor energy meters and sub-meters.	Yes	GSA has already installed advanced electricity meters covering >75 percent of portfolio electric consumption. GSA will continue to monitor and support installed meters.	GSA will install and monitor electric, gas, and steam meters as appropriate per EPACT 2005 and EISA.
Collect and utilize building and facility energy use data to improve building energy management and performance.	Yes	GSA monitors and analyzes building and facility energy use data through a variety of systems and practices including Energy Usage Analysis System, Advanced Meters, national and regional building level dashboards, monthly regional energy progress report, and GSAlink.	GSA will meet EO 13693's annual quantitative targets for energy use intensity.
Ensure that monthly performance data is entered into the EPA ENERGY STAR Portfolio Manager.	No	GSA uses this strategy but not among top four priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	

Building Efficiency, Performance, and Management Goal:

Section 3(h) of EO 13693 states that agencies will improve building efficiency, performance, and management and requires that agencies identify a percentage of the agency's existing buildings above 5,000 gross square feet intended to be energy, waste, or water net-zero buildings by FY 2025 and implement actions that will allow those buildings to meet that target. GSA's 2025 target is 2 percent.

Guiding Principles for Sustainable Federal Buildings:

Section 3(h) of EO 13693 also states that agencies will identify a percentage, by number or total GSF, of existing buildings above 5,000 GSF that will comply with the *Guiding Principles for Sustainable Federal Buildings (Guiding Principles)* by FY 2025. GSA's FY 2025 target is 25 percent of buildings above 5,000 GSF (by number of buildings).



Sustainable Buildings Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Include climate resilient design and management into the operation, repair, and renovation of existing agency buildings and the design of new buildings.	Yes	GSA continues to use climate change risk management to screen its Capital Investment Program and has updated and rolled out its 2016 P-100 facilities standard including climate change risk management.	GSA screens all capital projects for impacts of incremental climate change during the planned lifetime of the asset, the investment's support for core mission or mission dependent functions that are or are projected to be affected by climate change, and the asset's cultural and/or historical significance. Projects with identified climate risks receive ongoing support to manage climate, budget and mission and to determine how and when to address climate risk exposure by implementing adaptation measures. GSA will review and revise as needed to reflect the latest climate science and methodologies in the P100 annual update.
In planning new facilities or leases, include cost-effective strategies to optimize sustainable space utilization and consideration of existing community transportation planning and infrastructure, including access to public transit.	No	GSA worked with EPA to develop the Sustainable Location Index (SLI), which scores locations based on location efficiency factors. GSA's publicly-available Sustainable Location Calculator (SLC) allows users to view a location efficiency score for any site or address. GSA calculated its facility and portfolio-average scores, and has set a Blueprint Measure of a weighted average score of 70. GSA also conducted 14 meetings with local governments and stakeholders across all 11 GSA regions in FY 2015. These meetings identify projects, areas, best practices, and ideas of mutual interest outside of the timeframe of specific Federal real property actions.	GSA will work toward the average weighted score of 70 by implementing consideration of the SLI score and other sustainable location characteristics into planning for new space actions, including new guidance in the Leasing Desk Guide and for Local Portfolio Planning. In conjunction with GSA's Economic Catalyst Initiative, GSA is aiming to complete another 22 stakeholder meetings in FY 2016.
Ensure all new construction of Federal buildings greater than 5,000 GSF that enters the planning process be designed to achieve energy net-zero and, where feasible, water or waste net-zero by FY 2030.	No	GSA uses this strategy but not among top four priorities. GSA has already built or renovated several buildings to meet energy net-zero or near-net-zero specifications.	GSA will continue to study and refine net-zero design and construction techniques and will continue to aggressively pursue net-zero project opportunities where possible in new construction, major renovations, and ESPCs.

Include criteria for energy efficiency as a performance specification or source selection evaluation factor in all new agency lease solicitations over 10,000 rentable square feet.	No	GSA uses this strategy but not among top four priorities. GSA includes more than 30 mandatory green paragraphs in its leases, including requirements for energy efficiency, water conservation, reduced resource use, and indoor air quality.	
Incorporate green building specifications into all new construction, modernization, and major renovation projects.	No	GSA uses this strategy but not among top four priorities. Limited scope of current construction and major renovation activities mean that GSA has greater energy reduction opportunities in O&M activities and smaller retrofits.	100 percent of GSA's active new construction and major modernization projects must meet all applicable (in-scope) Guiding Principles by the end of each fiscal year. This ensures sustainable design best practices are included in projects as feasible, and it is tracked via GSA's "On Green" capital performance measure.
Implement space utilization and optimization practices and policies.	Yes	GSA has aggressively reduced space utilization per employee, most visibly via open plan and hoteling implementation in GSA's recent Central Office renovation. GSA continues to implement space-efficient practices in GSA spaces to assist tenant agencies with this strategy.	GSA will meet EO 13693's annual quantitative targets for energy use intensity and separately reported space efficiency targets under OMB's Reduce the Footprint initiative.
Implement programs on occupant health and well-being in accordance with the *Guiding Principles.*	Yes	GSA will leverage FITWEL, a building-certification program designed to positively impact employee productivity and health through targeted improvements. FITWEL was developed by CDC; the New York City Departments of Design and Construction, and of Health and Mental Hygiene; and GSA.	A third party certifier for FITWEL has been selected, and GSA will identify a subset of buildings to pursue the certification.
Develop and deploy energy and sustainability training for all facility and energy managers.	Yes	GSA provides internal and external training for building and energy managers. Over 3,000 employees participated in approximately 400 classes over the past 6 years through Penn State University. Trainings focused on Facilities Infrastructure, Fundamentals of High Performance Buildings, and Smart Buildings Operation. New Penn State courses in FY 2017 will address Fundamentals of Safety Management and Effective Facilities Operations and Maintenance. GSA also delivers training on implementing the Guiding Principles for Sustainable Existing Buildings and on its Energy Use Reduction program to all relevant positions, and requires its contractor O&M workforce to attend Building Retuning training.	GSA will meet or surpass all related annual quantitative targets under EO 13693. Training will help support meeting these targets.

Goal 3: Clean & Renewable Energy

Clean Energy Goal:

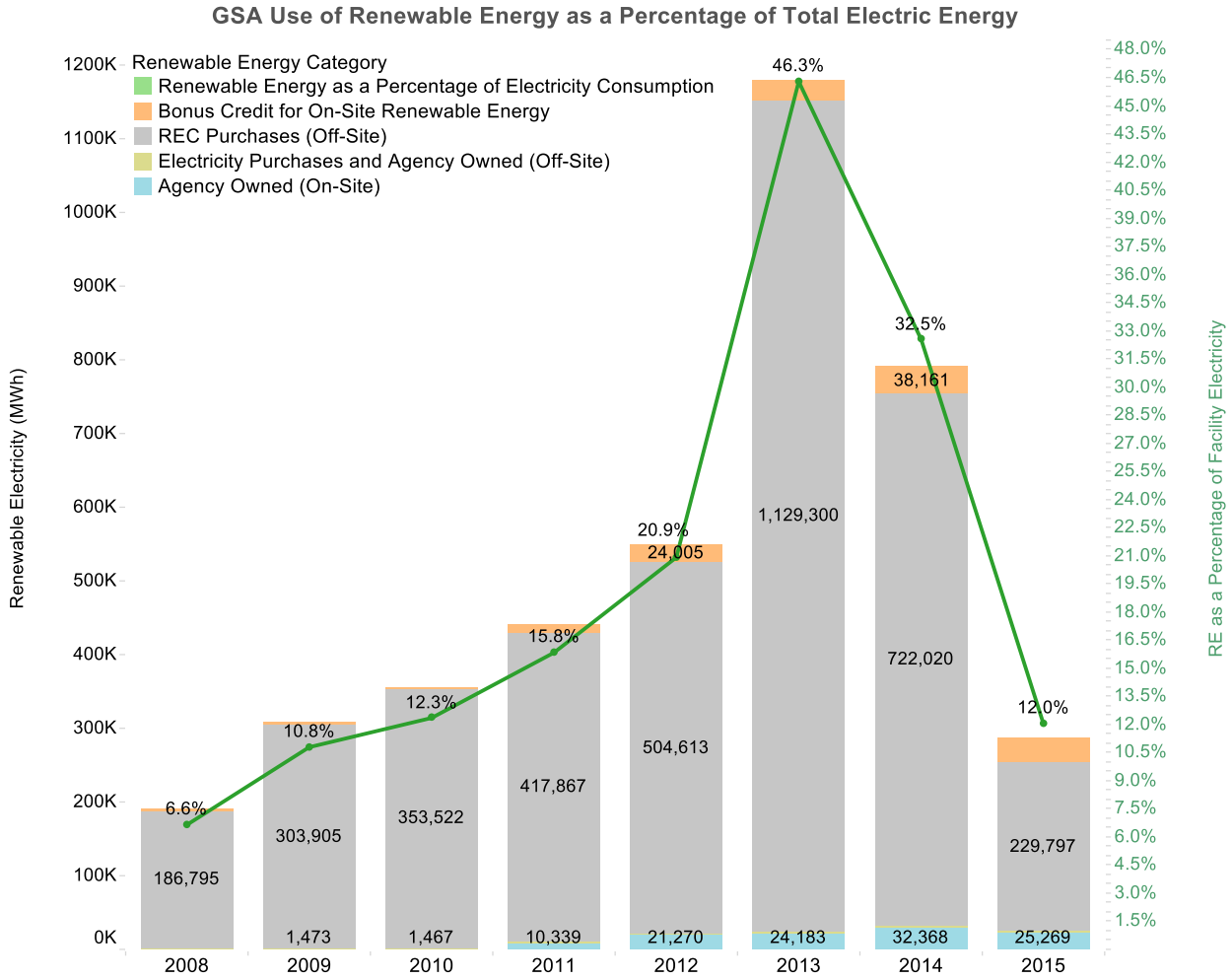
EO 13693 Section 3(b) requires that, at a minimum, the percentage of an agency's total electric and thermal energy accounted for by renewable and alternative energy shall be not less than: 10 percent in FY 2016-17; 13 percent in FY 2018-19; 16 percent in FY 2020-21; 20 percent in FY 2022-23; and 25 percent by FY 2025.

Renewable Electric Energy Goal:

EO 13693 Section 3(c) requires that all agencies use renewable energy accounting for not less than 10 percent of total electric energy consumption in FY 2016-17; 15 percent in FY 2018-19; 20 percent in FY 2020-21; 25 percent in FY 2022-23; and 30 percent by 2025.

As discussed in the Executive Summary section, in FY 2016, GSA declared an agency-level goal of achieving 100 percent renewable electricity use by FY 2025, with the following interim targets:

FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25 & beyond
46%	52%	58%	64%	70%	76%	82%	88%	94%	100%



Clean and Renewable Energy Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Install agency-funded renewable energy on-site and retain corresponding renewable energy certificates (RECs).	Yes	GSA pursues several strategies to install PV on-site including in conjunction with new construction and major renovations, standalone PPAs, and ESPCs.	GSA will meet or surpass EO 13693 annual targets for clean and renewable energy and agency-specific targets for renewable energy as stated above.
Contract for the purchase of energy that includes installation of renewable energy on or off-site and retain RECs or obtain replacement RECs.	Yes	GSA aggressively pursues this strategy.	GSA will meet or surpass EO 13693 annual targets for clean and renewable energy and agency-specific targets for renewable energy as stated above.
Purchase electricity and corresponding RECs or obtain equal value replacement RECs.	Yes	GSA aggressively pursues this strategy.	GSA will meet or surpass EO 13693 annual targets for clean and renewable energy and agency-specific targets for renewable energy as stated above.
Purchase RECs to supplement installations and purchases of renewable energy, when needed to achieve renewable goals.	Yes	GSA pursues this strategy as needed to meet targets while prioritizing the above three strategies.	GSA will meet or surpass EO 13693 annual targets for clean and renewable energy and agency-specific targets for renewable energy as stated above.
Install on-site thermal renewable energy and retain corresponding renewable attributes or obtain equal value replacement RECs.	Yes	GSA aggressively pursues this strategy where available and appropriate.	GSA will meet or surpass EO 13693 annual targets for clean and renewable energy and agency-specific targets for renewable energy as stated above.
Install on-site combined heat and power processes.	No	GSA pursues this strategy where available, most recently at the White Oak complex in Maryland.	
Identify opportunities to install on-site fuel cell energy systems.	No	GSA is investigating this strategy and will pursue it where appropriate but not among top five priorities.	
Identify opportunities to utilize energy that includes the active capture and storage of carbon dioxide emissions associated with energy generation.	No	GSA believes there are currently few available opportunities to use this strategy.	

Identify and analyze opportunities to install or contract for energy installed on current or formerly contaminated lands, landfills, and mine sites.	No	GSA is not aware of opportunities to pursue this strategy on-site within GSA's portfolio. For off-site installations, statutory incentives make it more cost-effective for GSA to prioritize contracting for energy generation on Federal or Tribal land.	
Identify opportunities to utilize energy from small modular nuclear reactor technologies.	No	GSA's larger energy-using locations are located in urban areas where GSA does not believe it would be feasible to install this technology.	

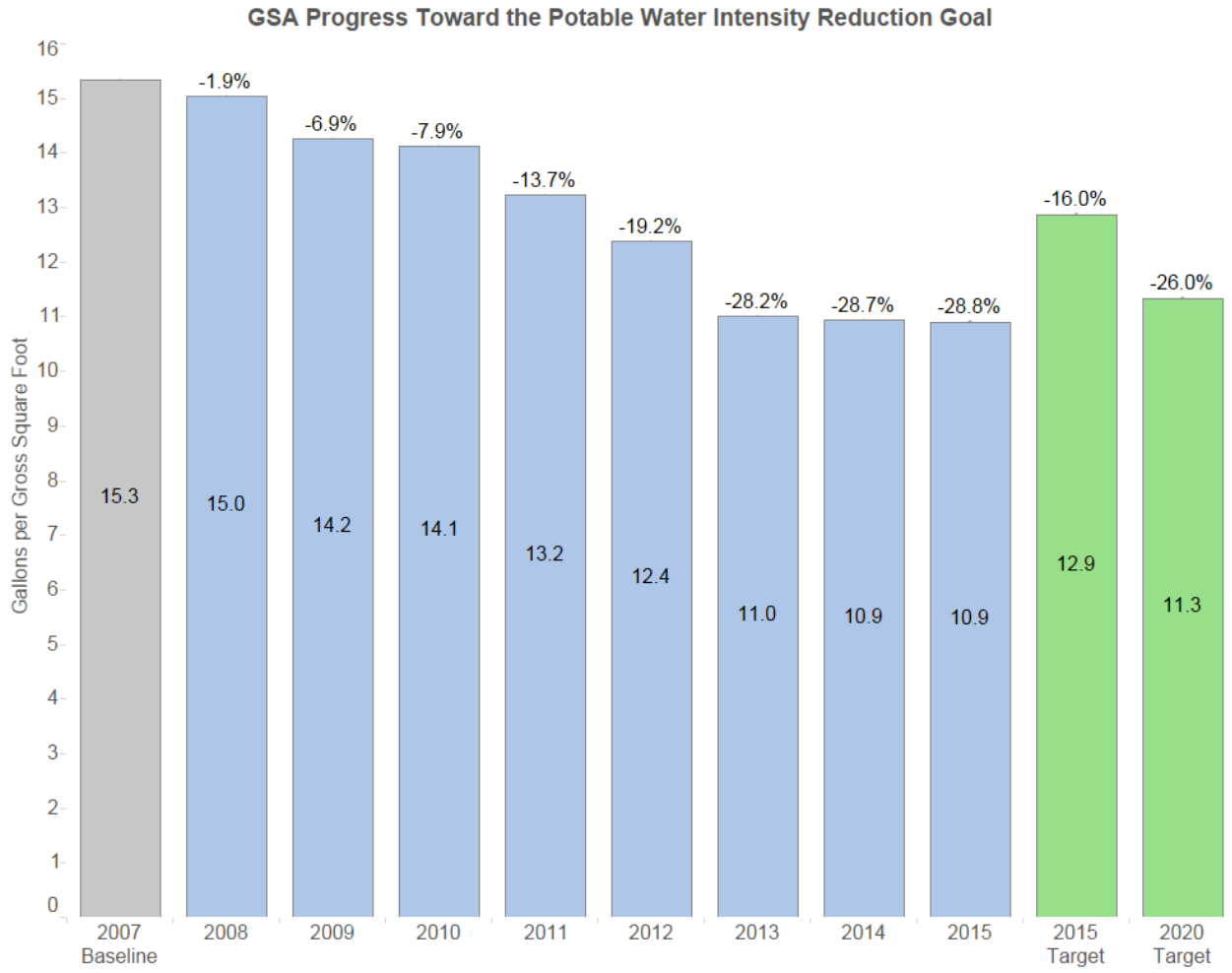
Goal 4: Water Use Efficiency & Management

Potable Water Consumption Intensity Goal:

EO 13693 Section 3(f) states that agencies must improve water use efficiency and management, including storm water management, and requires agencies to reduce potable water consumption intensity, measured in gallons per square foot, by 2 percent annually through FY 2025 relative to an FY 2007 baseline. A 36 percent reduction is required by FY 2025.

Industrial, Landscaping and Agricultural (ILA) Water Goal:

EO 13693 section 3(f) also requires that agencies reduce ILA water consumption, measured in gallons, by 2 percent annually through FY 2025 relative to a FY 2010 baseline.



Water Use Efficiency & Management Strategies:

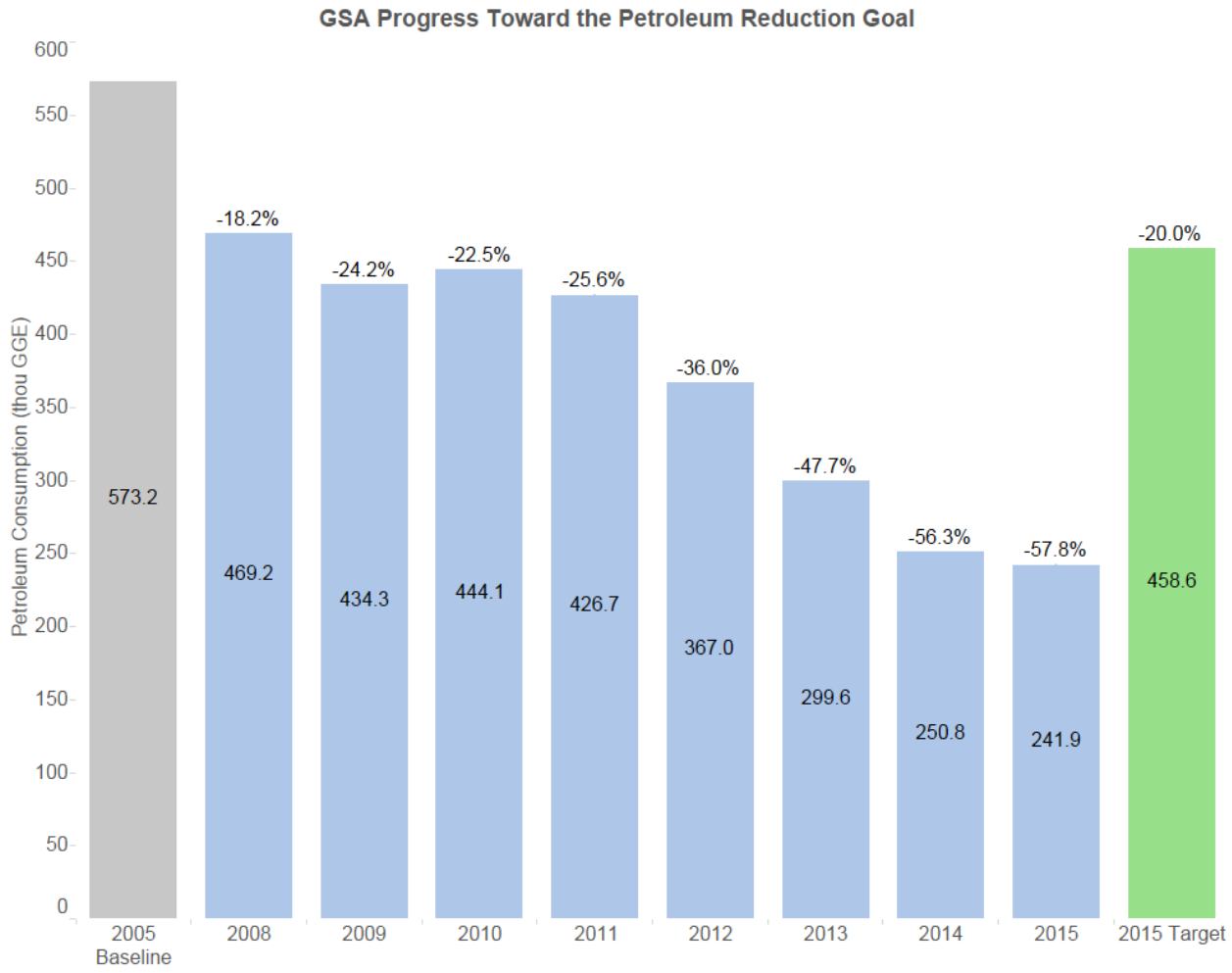
Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Install green infrastructure features to assist with storm and wastewater management.	Yes	GSA aggressively pursues this strategy, for example, by installing over 2 million square feet of green roofs to date. GSA has recently adopted the SITES certification program and added it into the 2016 P-100 standards applicable to GSA capital projects.	GSA will meet or surpass EO 13693's annual quantitative targets for water intensity reduction.
Install and monitor water meters and utilize data to advance water conservation and management.	Yes	GSA monitors and analyzes building and facility water use through a variety of systems and practices including Energy Use Analysis System, national and regional building level dashboards, and monthly regional water progress reports.	GSA will meet or surpass EO 13693's annual quantitative targets for water intensity reduction.
Install high efficiency technologies, e.g. WaterSense fixtures.	Yes	GSA includes these strategies in its P100 building standards and via sustainable acquisition policies, guidance, and training.	GSA will meet or surpass EO 13693's annual quantitative targets for water intensity reduction.
Prepare and implement a water asset management plan to maintain desired level of service at lowest life cycle cost.	No	Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	
Minimize outdoor water use and use alternative water sources as much as possible.	Yes	GSA is assessing greenscapes and replacing them with drought-tolerant landscaping where feasible, especially in Western states. GSA has recently adopted the SITES certification program and added it into the 2016 P-100 standards applicable to GSA capital projects.	GSA will meet or surpass EO 13693's annual quantitative targets for water intensity reduction.
Design and deploy water closed-loop, capture, recharge, and/or reclamation systems.	No	GSA deploys these systems where appropriate but not among top five priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	

Install advanced meters to measure and monitor potable and ILA water use.	Yes	Advanced water meters in GSA facilities are identifying leaks and providing GSA with a means to monitor repairs and corrections along with water savings achieved. GSA will continue to install advanced water meters where cost-effective and link them to facility and centralized monitoring systems to detect irregular use, including irrigation system leaks.	GSA will meet or surpass EO 13693's annual quantitative targets for water intensity reduction.
Develop and implement programs to educate employees about methods to minimize water use.	No	GSA uses this strategy but not among top five priorities. GSA set up green teams and participates in the U.S. Environmental Protection Agency's (EPA) Federal Green Challenge. These are volunteer-driven efforts to engage tenants on sustainable practices at the office, including water efficiency.	
Assess the interconnections and dependencies of energy and water on agency operations, particularly climate change's effects on water which may impact energy use.	No	GSA uses this strategy but not among top five priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	
Consistent with State law, maximize use of gray water and water reuse systems that reduce potable and ILA water consumption.	No	GSA deploys these systems where appropriate but not among top five priorities. GSA includes these strategies in its P100 building standards.	
Consistent with State law, identify opportunities for aquifer storage and recovery to ensure consistent water supply availability.	No	GSA is not aware of opportunities for the agency to implement aquifer storage. GSA pursues strategies to minimize aquifer withdrawals and promote recovery as described elsewhere in this table.	
Ensure that planned energy efficiency improvements consider associated opportunities for water conservation.	No	GSA uses this strategy but not among top five priorities. Other available strategies have more substantial impacts on financial savings and attainment of EO 13693 goals.	
Where appropriate, identify and implement regional and local drought management and preparedness strategies that reduce agency water consumption	No	GSA uses this strategy but not among top five priorities. GSA's Pacific Rim Region developed a Water Adaptation Plan to identify vulnerabilities in its operational infrastructure. This plan includes no- or low-cost water efficiency measures.	

Goal 5: Fleet Management

Fleet Petroleum Use Reduction Goal:

EO 13514 and the Energy Independence and Security Act of 2007 (EISA) required that by FY 2015 agencies reduce fleet petroleum use by 20 percent compared to a FY 2005 baseline.



Fleet Alternative Fuel Consumption Goal:

Agencies should have exceeded an alternative fuel use that is at least 5 percent of total fuel use. In addition, EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, required that agencies increase total alternative fuel consumption by 10 percent annually from the prior year starting in FY 2005. By FY 2015, agencies must have increased alternative fuel use by 159.4 percent, relative to FY 2005.

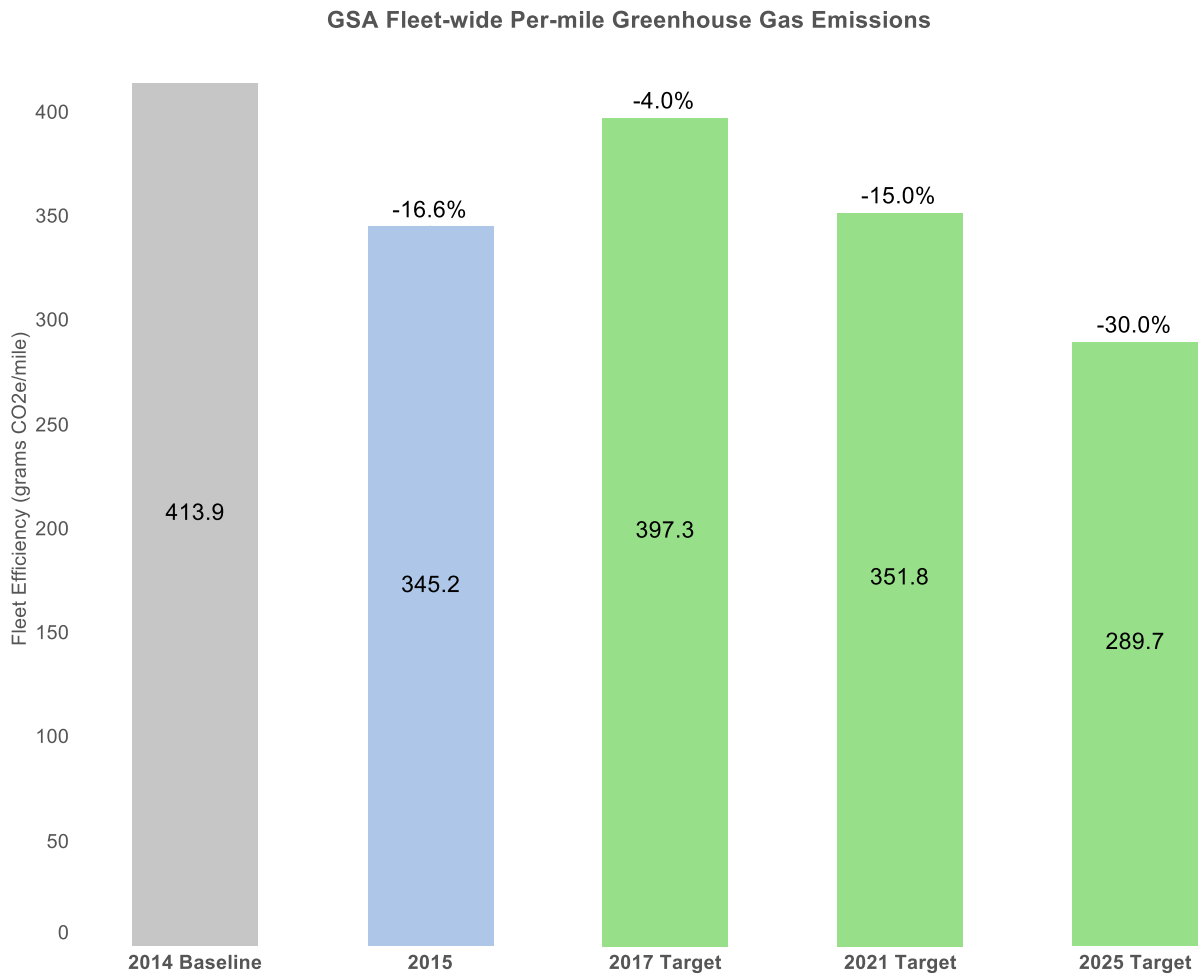
In FY 2015, GSA's use of alternative fuel equaled 1.64 percent of total fuel use. GSA has decreased its alternative fuel use by 86.6 percent since FY 2005.

Fleet Per-Mile Greenhouse Gas (GHG) Emissions Goal:

EO 13693 Section 3(g) states that agencies with a fleet of at least 20 motor vehicles will improve fleet and vehicle efficiency and management. EO 13693 section 3(g)(ii) requires agencies to reduce fleet-wide per-mile

GHG emissions from agency fleet vehicles relative to a FY 2014 baseline and sets new goals for percentage reductions: not less than 4 percent by FY 2017; not less than 15 percent by FY 2020; and not less than 30 percent by FY 2025.

EO 13693 Section 3(g)(i) requires that agencies determine the optimum fleet inventory, emphasizing eliminating unnecessary or non-essential vehicles. The Fleet Management Plan and Vehicle Allocation Methodology (VAM) Report are included as appendices to this plan.



Fleet Management Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Collect and utilize agency fleet operational data through deployment of vehicle telematics.	Yes	GSA internal fleet allocates leased vehicles from GSA Fleet for internal use. By Q2 FY 2017, all newly acquired passenger and light duty vehicles will include telematics.	During FY 2016 and 2017, GSA will evaluate the availability of compliant vehicles and begin acquiring them as soon as practicable.
Ensure that agency annual asset-level fleet data is properly and accurately accounted for in a formal Fleet Management Information System as well as submitted to the Federal Automotive Statistical Tool reporting database, the Federal Motor Vehicle Registration System, and the Fleet Sustainability Dashboard (FLEETDASH) system.	No	GSA uses this strategy but not among top five priorities. GSA has a robust FMIS in place for GSA Fleet vehicles and it offers this FMIS to agencies for use in their owned vehicles at no additional cost. The GSA internal fleet consists entirely of GSA Fleet vehicles, so all GSA internal vehicles report information through the GSA FMIS.	
Increase acquisitions of zero emission and plug-in hybrid vehicles.	Yes	GSA will acquire zero-emission or plug-in hybrid vehicles within its internal fleet.	In FY 2015 and 2016, GSA internal fleet conducted a Vehicle Allocation Methodology (VAM), to establish an optimal fleet plan to include zero-emission and/or plug-in hybrid vehicles. GSA will maintain and/or increase the proportion of these vehicles to attain the optimal fleet composition. Preliminary VAM results suggest GSA has the potential to increase its fleet's share of zero emission (ZEV) or plug-in hybrid vehicles by approximately 5 percent in FY 2016-2017.
Issue agency policy and a plan to install appropriate charging or refueling infrastructure for zero emission or plug-in hybrid vehicles and opportunities for ancillary services to support vehicle-to-grid technology.	Yes	GSA internal fleet participated in both GSA Fleet EV pilots and plans to continue to actively participate in any future new vehicle technology pilots. Additionally, GSA internal fleet will research the possibility of using the existing 168 charging stations at Federal agency sites across the United States when there is no GSA internal infrastructure available.	In FY 2015 and 2016, GSA internal fleet conducted a VAM, to establish an optimal fleet composition to include zero-emission or plug-in hybrid vehicles including potential future charging station infrastructure utilizing GSA's Schedules program. In FY 2017, GSA will award a government-wide charging station infrastructure BPA.

Optimize and right-size fleet composition, by reducing vehicle size, eliminating underutilized vehicles, and acquiring and locating vehicles to match local fuel infrastructure.	Yes	GSA will continue to reduce the number of vehicles in its internal fleet and replace retiring vehicles with more efficient, alternative fuel vehicles. As of FY 2015, GSA internal fleet reduced the size of its fleet from 1,005 vehicles in FY 2014 to 967 in FY 2015.	By the end of FY 2016, GSA's internal fleet will consist of no more than 967 vehicles.
Increase utilization of alternative fuel in dual-fuel vehicles.	No	GSA's small fleet size, fuel availability issues, and the uncertain environmental benefits of E85 fuel make additional effort in this area a low priority for GSA.	
Use a FMIS to track real-time fuel consumption throughout the year for agency-owned, GSA-leased, and commercially-leased vehicles.	No	GSA's small fleet size and low overall fuel consumption make additional effort in this area a low priority for GSA.	
Implement vehicle idle mitigation technologies.	No	GSA's small fleet size, small average vehicle size, and low overall fuel consumption make additional effort in this area a low priority for GSA.	
Minimize use of law enforcement exemptions by implementing GSA Bulletin FMR B-33, Motor Vehicle Management, Alternative Fuel Vehicle Guidance for Law Enforcement and Emergency Vehicle Fleets.	No	GSA's small fleet size and few opportunities to use this exemption make additional effort in this area a low priority for GSA.	
Where State vehicle or fleet technology or fueling infrastructure policies are in place, meet minimum requirements.	No	GSA will meet these requirements but small fleet size makes additional effort in this area a low priority for GSA.	
Establish policy/plan to reduce miles traveled, e.g. through vehicle sharing, improving routing with telematics, eliminating trips, improving scheduling, and using shuttles, etc.	No	In FY 2015, GSA Fleet conducted car-sharing pilots to supplement the Washington, DC based internal GSA fleet and partner with DOT in Providence, RI. Utilization was low, therefore resulting data and conclusions that can be drawn are limited. Pilot experience indicates each agency needs to examine their individual requirements and current fleet options to determine if car sharing can be an effective solution.	

Goal 6: Sustainable Acquisition

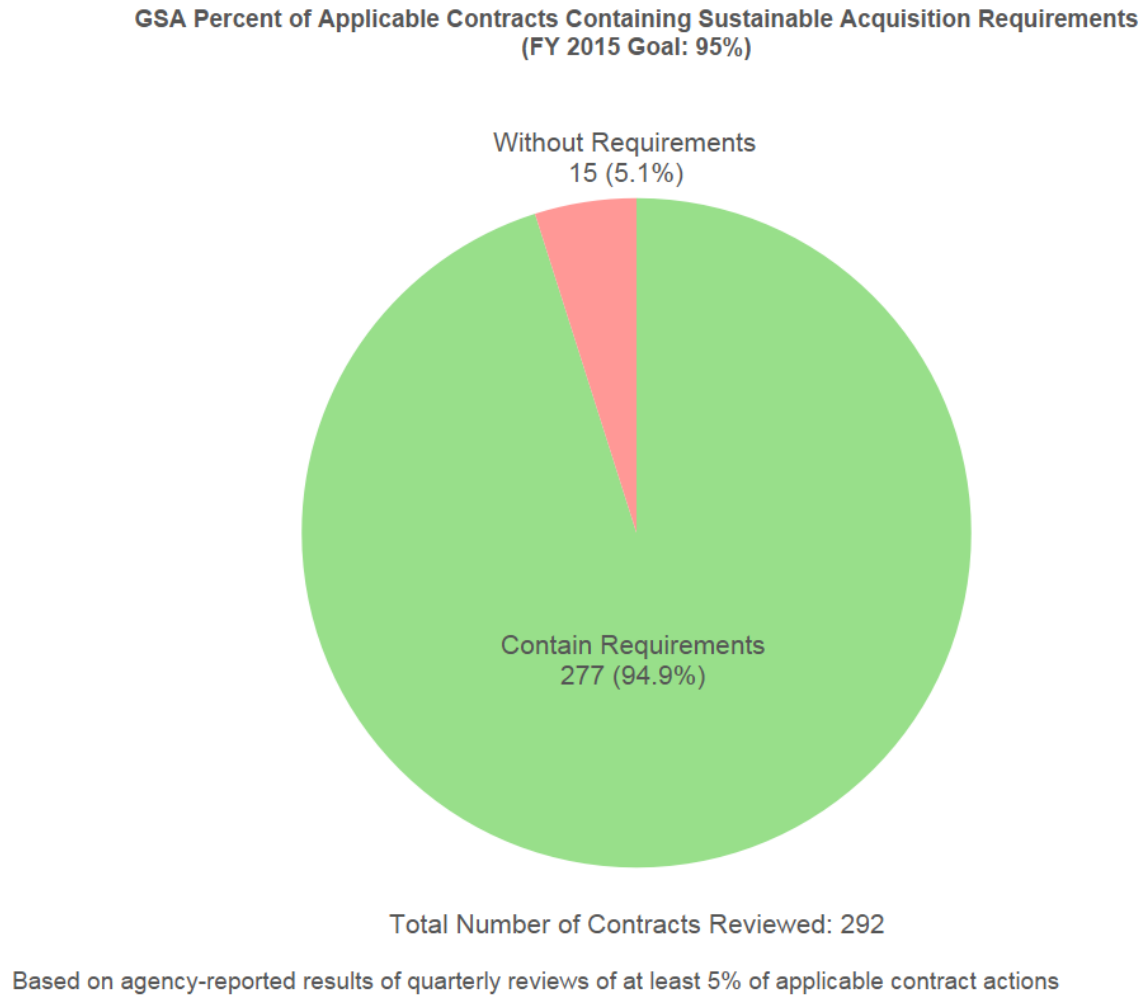
Sustainable Acquisition Goal:

EO 13693 section 3(i) requires agencies to promote sustainable acquisition by ensuring that environmental performance and sustainability factors are considered to the maximum extent practicable for all applicable procurements in the planning, award and execution phases of acquisition.

Bio-based Purchasing Targets:

The Agricultural Act of 2014 requires that agencies establish a targeted bio-based-only procurement requirement. EO 13693 section 3(iv) requires agencies to establish an annual target for increasing the number of contracts to be awarded with Bio-Preferred and bio-based criteria and the dollar value of Bio-Preferred and bio-based products to be delivered and reported under those contracts in the following fiscal year.

For FY 2017, GSA has established a target of 9504 contracts and $45,783,579 in products to be delivered.



Sustainable Acquisition Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Establish and implement policies to meet statutory mandates requiring purchasing preference for recycled content products, ENERGY STAR qualified and FEMP-designated products, and Bio-preferred and bio-based products designated by USDA.	No	GSA uses this strategy but not among top priorities. GSA pursues this goal in the context of broader procurement policies, strategies, and programs. GSA continues to offer these products to other agencies through its Multiple Award Schedules, Global Supply, and strategic sourcing contract vehicles.	
Establish and implement policies to purchase sustainable products and services identified by EPA programs, including SNAP, WaterSense, Safer Choice, and Smart Way.	No	GSA uses this strategy but not among top priorities. GSA pursues this goal in the context of broader procurement policies, strategies, and programs. GSA continues to offer these products to other agencies through its Multiple Award Schedules, Global Supply, and strategic sourcing contract vehicles.	
Ensure contractors submit timely annual reports of their Bio-Preferred and bio-based purchases.	No	GSA uses this strategy but not among top priorities. GSA pursues this goal in the context of broader procurement policies, strategies, and programs.	
Reduce copier and printing paper use and acquiring uncoated printing and writing paper containing at least 30 percent postconsumer recycled content or higher.	No	GSA uses this strategy but not among top priorities. GSA pursues this goal in the context of broader procurement policies, strategies, and programs.	
Identify and implement corrective actions to address barriers to increasing sustainable acquisitions.	Yes	GSA developed and provides guidance on SFTool for Government-wide use to validate contractor compliance with sustainable requirements.	GSA will continue to provide guidance on the SFTool and incorporate any new best practices into the validation module.
Incorporate compliance with contract sustainability requirements into procedures for monitoring contractor past performance and report on contractor compliance in performance reviews.	No	GSA uses this strategy but not among its top priorities. Since FY 2014, GSA integrated this requirement into agency-wide policy for all acquisitions. GSA will continue this strategy in FY 2016 and 2017.	

Review and update agency specifications to include and encourage products that meet sustainable acquisition criteria.	Yes	GSA has identified 10 frequently used construction and custodial products and has developed easy-to-understand sustainability standards for each of them that address all applicable Federal requirements. These Key Sustainable Product standards were added to most contract templates and guidance last year; this year, guidance will be developed on including these product standards in the full array of construction project types used by GSA.	GSA will achieve 100 percent compliance with the 10 standards by Q3/Q4 FY 2017, measured as part of the OMB sustainable purchasing review.
Identify opportunities to reduce supply chain emissions and incorporate criteria or contractor requirements into procurements.	Yes	GSA has been piloting the inclusion of supply chain GHG emissions requirements in solicitations and evaluation factors. GSA will continue to include GHG emissions reporting in solicitations, particularly in industries where it has not yet done so.	In FY 2017, GSA will include supply chain emissions requirements in at least five acquisitions and include climate change risk management planning in at least two acquisitions.
Update and deploy agency procurement policies and programs to ensure that federally mandated designated sustainable products are included in all relevant procurements and services.	Yes	GSA reviews all Multiple Award Schedules and GWAC solicitations, Global Supply Item Purchase Descriptions, and tools such as GSA Advantage! and the Green Procurement Compilation on an on-going basis for opportunities to add required or optional green products. In FY 2016, GSA updated the Federal Acquisition Service's sustainable acquisition policies and procedures document to reflect EO 13693.	As the EPA, DOE, and USDA environmental programs update or add product designations, GSA will review and revise its contract vehicles and tools to reflect the changes.
Include sustainability requirements in future FSSI, Schedules, and IDIQ contracts.	Yes	GSA includes sustainability requirements, including consideration of contractor carbon management practices, in its strategic acquisition programs as appropriate. As the executive for five of the Category Management categories, GSA also is considering sustainability for each of those category's initiatives.	In FY 2016 and 2017, GSA will include sustainability requirements in strategic sourcing contracts for human resources services, building maintenance and operations services, and IT services. GSA will include climate change risk planning requirements in two acquisitions. GSA also will collaborate with Category Management team members to include sustainability in category initiatives.

Goal 7: Pollution Prevention & Waste Reduction

Pollution Prevention & Waste Reduction Goal:

EO 13693 section 3(j) requires that Federal agencies advance waste prevention and pollution prevention and to annually divert at least 50 percent of non-hazardous construction and demolition debris. Section 3(j)(ii) further requires agencies to divert at least 50 percent of non-hazardous solid waste, including food and compostable material, and to pursue opportunities for net-zero waste or additional diversion.

Reporting on progress toward the waste diversion goal will begin with annual data for FY 2016.

Pollution Prevention & Waste Reduction Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Report in accordance with the requirements of sections 301 through 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C 11001-11023).	No	GSA Regional Offices will determine EPCRA applicability and continue to comply with the EPCRA reporting requirements for hazardous chemical emergency planning by Federal, State, and local governments. GSA Regional Offices will determine EPCRA Tier II applicability, and report in accordance with EPA and State requirements and procedures.	
Reduce or minimize the quantity of toxic and hazardous chemicals acquired, used, or disposed of, particularly where such reduction will assist the agency in pursuing agency greenhouse gas reduction targets.	Yes	See “Inventory HFC” row below. GSA does not use significant quantities of toxic or hazardous chemicals other than as part of COTS materials and supplies used in our buildings. We are working to procure sustainable alternatives for these materials and products, see Goal 5, Sustainable Acquisition.	GSA will meet or exceed annual quantitative Executive Order and internal targets for Scope 1 & 2 GHG emissions.
Eliminate, reduce, or recover refrigerants and other fugitive emissions.	Yes	See “Inventory HFC” row below. In FY 2015, GSA surveyed facilities across its portfolio of owned buildings to refine FY 2014 baseline chiller refrigerants data, including excess refrigerants in storage and no longer needed.	GSA will migrate the refrigerants data to a centralized management system. GSA will issue internal guidance to reduce, recover, and reclaim refrigerants in accordance with amended EPA Clean Air Act refrigerant management regulations.

Reduce waste generation through elimination, source reduction, and recycling.	Yes	In FY 2015, GSA launched a national solid waste management database within GSA's Sustainable Operations & Maintenance Tool to track: the amount of solid waste landfilled, recycled, and composted at individual GSA-owned buildings; waste diversion percentage by weight; and, where feasible, trash disposal costs and revenues. GSA continues to use the database in FY 2016 to report and compare waste diversion by building and Region. The data are linked to buildings pursuing green building certification and conformance with the Guiding Principles.	GSA will meet or exceed EO 13693's 50 percent annual goals for diversion of non-hazardous solid waste and construction waste.
Implement integrated pest management and improved landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials.	No	GSA's National Custodial Specification requires that all custodial contractors develop an IPM plan and use IPM practices for both landscaping and interior pest control. GSA's national Custodial specification also addresses the President's memorandum of June 20, 2014, to protect pollinator habitats including: honey bees, native bees, birds, bats, and butterflies.	
Develop or revise Agency Chemicals Inventory Plans and identify and deploy chemical elimination, substitution, and/or management opportunities.	No	GSA does not use significant quantities of chemicals other than as part of COTS materials and supplies used in our buildings. We are working to procure sustainable alternatives for these materials and products, see Goal 5, Sustainable Acquisition.	
Inventory current HFC use and purchases.	Yes	In FY 2014, GSA estimated fugitive HFC emissions from an inventory of chillers across its portfolio of owned buildings. GSA used a simplified screening methodology, developed by the EPA, to calculate HFC emissions as part of the GHG inventory. In FY 2015, GSA developed a survey and used it to refine its inventory of chillers and baseline estimate of HFC emissions. GSA also identified a facilities maintenance database to migrate and maintain refrigerant data.	GSA will meet or exceed annual quantitative Executive Order and internal targets for Scope 1 & 2 GHG emissions.
Require high-level waiver or contract approval for any agency use of HFCs.	No	GSA does not have specialized uses of HFCs. GSA uses HFCs as refrigerants in air conditioning and refrigeration appliances. GSA will investigate procurement of alternative refrigerants identified by EPA's SNAP program, through acquisition policy, as alternative refrigerants become commercially available.	
Ensure HFC management training and recycling equipment are available.	No	GSA's operations and maintenance (O&M) contract specifications require heating, ventilation, and air conditioning (HVAC) technicians to maintain HVAC training and certification, including certification required by the EPA under Section 608 of the Clean Air Act. The O&M contract also requires contractors to recover and recycle refrigerants. GSA will work to incorporate HFC requirements in contract specifications, consistent with EPA regulations and guidance.	

Track and report construction and demolition (C&D) waste diverted from landfills.	Yes	In FY 2015, GSA tracked C&D waste diversion rates for capital projects. In FY 2016, GSA expanded its diversion tracking to additionally include small projects above $25,000. GSA will divert at least 50 percent of its total C&D waste. Pursuant to Executive Order, diversion rates are determined at project close-out based on the total weight of non-hazardous C&D waste generated at construction and modernization projects.	GSA will meet or exceed EO 13693's 50 percent annual goals for diversion of non-hazardous solid waste and construction waste.

Goal 8: Energy Performance Contracts

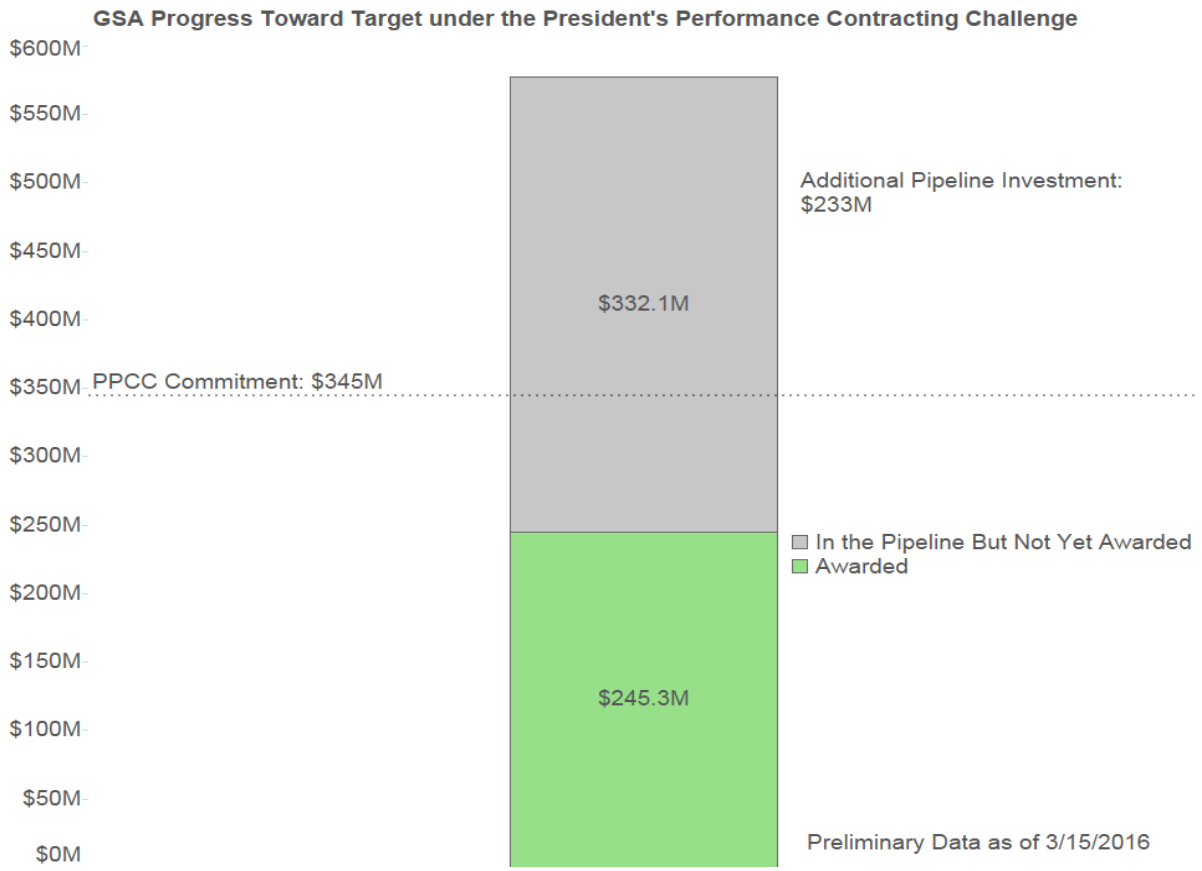
Performance Contracting Goal:

EO 13693 section 3(k) requires that agencies implement performance contracts for Federal buildings. EO 13693 section 3(k)(iii) also requires that agencies provide annual agency targets for performance contracting. GSA's commitment under the President's Performance Contracting Challenge (PPCC) is $344.5 million in contracts awarded by the end of calendar year 2016. GSA's targets for the next two fiscal years are:

- FY 2017: $21,000,000
- FY 2018: $50,000,000

GSA's total commitment for the PPCC (2011–2016) was $344,500,000. To date (June 30, 2016), GSA has awarded $491.0 million. Because GSA far exceeded its new award target in FY16, it will reduce its pace of new awards slightly in FY17 to focus on ensuring a robust measurement & verification (M&V) program for existing projects and building out the ESPC ENABLE streamlined ESPC contracting program, in collaboration with FEMP and GSA Federal Supply Schedule 84. GSA's target for FY 2018 is to award approximately 15 percent of estimated annual energy costs, or $50 million.

Chart: Progress Toward Target under the President's Performance Contracting Challenge:



Performance Contracting Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Utilize performance contracting to meet identified energy efficiency and management goals while deploying life-cycle cost effective energy and clean energy technology and water conservation measures.	Yes	GSA intends to continue its performance contracting program.	GSA will meet or exceed its annual EUI goals and PPCC award commitment and demonstrate regular progress in OMB MAX as required.
Fulfill existing agency target/ commitments towards the PPCC by the end of CY16.	Yes	See boxes below for detailed descriptions of GSA's ESPC program strategies	GSA will meet or exceed its PPCC award commitment and demonstrate regular progress in OMB MAX as required.
Evaluate 25% of agency's most energy intensive buildings for opportunities to use ESPCs/UESCs to achieve goals.	Yes	Buildings are sorted by energy intensity for the most recent full fiscal year for all buildings within each region. Then buildings are evaluated by the regions. Regional needs are reviewed and final projects are included based upon energy and regional needs.	GSA will meet or exceed its PPCC award commitment and demonstrate regular progress in OMB MAX as required.
Prioritize top ten portfolio wide projects which will provide greatest energy savings potential.	Yes	Regional projects are submitted and a verification of significant energy savings potential is made by central office. Multiple buildings are bundled together for greatest energy savings potential.	GSA will meet or exceed its PPCC award commitment and demonstrate regular progress in OMB MAX as required.
Identify and commit to include on site renewable energy projects in a percentage of energy performance contracts.	No	GSA uses this strategy but not among top 4-7 priorities. GSA is requesting all ESCOs to explore renewable energy in our projects and has listed that as an objective.	
Submit proposals for technical or financial assistance to FEMP and/or use FEMP resources to improve performance contracting program.	No	GSA utilizes these resources as needed.	
Work with FEMP/USACE to cut cycle time of performance contracting process, targeting a minimum 25% reduction.	No	GSA uses this strategy but not among top 4-7 priorities. Because we have bundled multiple buildings into projects, the time for each project may be longer but the net effect will be far more buildings evaluated under an ESPC contract.	

Ensure agency legal and procurement staff are trained by the FEMP ESPC/UESC course curriculum.	No	GSA seeks training as needed.	
Provide measurement and verification data for all awarded projects	Yes	GSA provides this to DOE FEMP.	DOE will receive all M&V reports for contracts awarded under the DOE IDIQ.
Enter all reported energy savings data for operational projects into MAX COLLECT (max.gov)	Yes	GSA will gather all necessary input for Max Collect and enter into OMB Max.	GSA will meet or exceed its PPCC award commitment and demonstrate regular progress in OMB MAX as required.

Goal 9: Electronics Stewardship & Data Centers

Electronics Stewardship Goals:

EO 13693 Section 3(l) requires that agencies promote electronics stewardship, including procurement preference for environmentally sustainable electronic products; establishing and implementing policies to enable power management, duplex printing, and other energy efficient or environmentally sustainable features on all eligible agency electronic products; and employing environmentally sound practices with respect to the agency's disposition of all agency excess or surplus electronic products.

Agency Progress in Meeting Electronics Stewardship Goals:

Procurement Goal:

100 percent of monitors, PCs, and laptops acquired meet environmentally sustainable electronics criteria (EPEAT registered).

FY 2015 Progress: 100 percent

Power Management Goal:

100 percent of computers, laptops, and monitors have power management features enabled.

FY 2015 Progress: 100 percent of equipment has power management enabled.

0 percent of equipment has been exempted.

End-of-Life Goal:

100 percent of electronics disposed using environmentally sound methods, including GSA Xcess, Computers for Learning, Unicor, U.S. Postal Service Blue Earth Recycling Program, or Certified Recycler (R2 or E-Stewards).

FY 2015 Progress: 100 percent

Data Center Efficiency Goal:

EO 13693 Section 3(a) states that agencies must improve data center efficiency at agency facilities, and requires that agencies establish a power usage effectiveness target in the range of 1.2-1.4 for new data centers and less than 1.5 for existing data centers.

Electronics Stewardship Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Use government-wide strategic sourcing vehicles to ensure procurement of equipment that meets sustainable electronics criteria.	Yes	The supply of Energy Star or EPEAT products is required in some Multiple Award Schedules or Federal Strategic Sourcing Initiative solutions and optional in others. In 2016 and 2017, GSA will continue to review its product Multiple Award Schedules for additional opportunities to include Energy Star, EPEAT, and other sustainable product requirements or options. GSA policy is to specify 100 percent environmentally sustainable electronic products for applicable internal purchases.	100 percent compliance for applicable GSA internal purchases as demonstrated by OMB Scorecard sustainable purchasing reviews.
Enable and maintain power management on all eligible electronics; measure and report compliance.	Yes	GSA requires these settings for all eligible devices agency-wide. GSA will continue to monitor implementation of these settings to ensure 100 percent compliance.	100 percent compliance as demonstrated by OMB Scorecard and internal reviews.
Implement automatic duplexing and other print management features on all eligible agency computers and imaging equipment; measure and report compliance.	Yes	GSA requires these settings for all eligible devices agency-wide. GSA will continue to monitor implementation of these settings to ensure 100 percent compliance.	100 percent compliance as demonstrated by OMB Scorecard and internal reviews.
Ensure environmentally sound disposition of all agency excess and surplus electronics, consistent with Federal policies on disposal of electronic assets, and measure and report compliance.	Yes	GSA uses and guides agencies to use recyclers certified to eSteward, R2, or equivalent standards for applicable products in accordance with the National Electronics Stewardship Strategy. In FY 2016, GSA developed and shared guidance on incorporating product take-back into contracts. The guidance was shared with other Federal agencies through the Federal Electronics Stewardship Working Group.	100 percent compliance for internal disposals as demonstrated by OMB Scorecard and internal reviews. In FY 2016 and 2017, GSA will move towards publishing Final Rule FMR 102-36 on electronics stewardship. GSA is working with customer agencies to identify Federal criteria which must be included in a Federal electronics recycling standard. These criteria will be included in the Final Rule after public comment.
Improve tracking and reporting systems for electronics stewardship requirements through the lifecycle: acquisition and procurement, operations and maintenance, and end-of-life management.	Yes	GSA continues to monitor and evaluate its tracking and reporting systems for electronics stewardship and will implement improvements as they are identified.	100 percent compliance as demonstrated by OMB Scorecard and internal reviews.

Data Center Efficiency Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Develop, issue, and implement policies, procedures, and guidance for data center energy optimization, efficiency, and performance.	Yes	GSA is deploying technologies in its data centers to allow for improved PUE. GSA also ensures that all servers and other data center equipment are disposed of in a cost-effective and environmentally sound manner at end of life.	GSA will meet or surpass EO 13693's quantitative targets for PUE in new and existing data centers and will continue to deploy cost-effective energy management technologies and dispose of decommissioned data center equipment in accordance with the National Strategy for Electronics Stewardship (NSES).
Install and monitor advanced energy meters in all data centers (by fiscal year 2018) and actively manage energy and power usage effectiveness.	Yes	GSA has already installed and monitors advanced energy meters in its core data centers and selected non-core data centers where feasible. GSA will continue to meter, decommission or consolidate remaining non-core data centers.	GSA will meet or surpass EO 13693's quantitative targets for PUE in new and existing data centers.
Minimize total cost of ownership in data center and cloud computing operations.	Yes	Of its 122 non-core data centers, 82 percent (100 data centers) are slated to be closed, which is in excess of OMB's Government-wide goal of 40 percent by FY 2015.	Continue to meet OMB milestones for data center consolidation and analyze/minimize TCO in cloud service and new equipment acquisitions.
Identify, consolidate and migrate obsolete, underutilized and inefficient data centers to more efficient data centers or cloud providers; close unneeded data centers.	Yes	Of its 122 non-core data centers, 82 percent (100 data centers) are slated to be closed, which is in excess of OMB's Government-wide goal of 40 percent by FY 2015.	GSA will meet or surpass EO 13693's quantitative targets for PUE in new and existing data centers.
Improve data center temperature and air-flow management to capture energy savings.	No	GSA uses this strategy but not among top priorities. This strategy is most applicable to new data center construction or major renovations, which are infrequent occurrences for GSA.	
Assign certified Data Center Energy Practitioner(s) to manage core data center(s).	No	GSA does not manage enough data centers to justify dedicated staff for data center energy management.	

Goal 10: Climate Change Resilience

EO 13653, *Preparing the United States for the Impacts of Climate Change*, outlines Federal agency responsibilities in the areas of supporting climate resilient investment; managing lands and waters for climate preparedness and resilience; providing information, data and tools for climate change preparedness and resilience; and planning.

EO 13693 Section 3(h)(viii) states that as part of building efficiency, performance, and management, agencies should incorporate climate-resilient design and management elements into the operation, repair, and renovation of existing agency buildings and the design of new agency buildings. In addition, Section 13(a) requires agencies to identify and address projected impacts of climate change on mission critical water, energy, communication, and transportation demands and consider those climate impacts in operational preparedness planning for major agency facilities and operations. Section 13(b) requires agencies to calculate the potential cost and risk to mission associated with agency operations that do not take into account such information and consider that cost in agency decision-making.

Climate Change Resilience Strategies:

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Strengthen agency external mission, programs, policies and operations (including grants, loans, technical assistance, etc.) to incentivize planning for, and addressing the impacts of, climate change.	N/A	GSA does not distribute grants, loans or technical assistance.	
Update and strengthen agency internal mission, programs, policies, and operations to align with the Guiding Principles, including facility acquisition, planning, design, training, and asset management processes, to incentivize planning for and addressing the impacts of climate change.	Yes	GSA continues to use climate change risk management to screen its Capital Investment Program and has updated and rolled out its FY16 P-100 facilities standard to include climate change risk management. GSA is developing a decision-making framework to assist GSA customers to identify and manage climate-related risks to their supply chains. GSA will also continue requiring contractors for select procurements to address climate change risk management planning as a contract deliverable.	GSA will support delivery of projects where climate impacts are relevant. The support is tailored to customer mission, budget, project phase, and location. GSA will review and revise as needed to reflect latest the climate science and methodologies in the P100 annual update. GSA will post the new framework to SFTool by August 31, 2016 and present to relevant agency adaptation groups during Q1-3 of FY 17.
Develop a decision-making framework to assist GSA customers with identifying and managing climate-related risks to their supply chains.	Yes	The framework is intended to prompt customer agencies to coordinate with their internal mission assurance teams regarding short term risks of sudden disruption related to climate change impacts while considering long-term needs to ensure supply chain resilience to climate-related impacts.	GSA will post the new framework to SFTool by August 31, 2016 and present to relevant agency adaptation groups during Q1-3 of FY 17.

Update emergency response, health, and safety procedures and protocols to account for projected climate change, including extreme weather events.	Yes	Since 2012, GSA's Office of Mission Assurance (OMA) has been an integral partner and contributor to the efforts to address incremental climate change adaptation planning. OMA is well positioned to respond to extreme weather events and understands the implications of more frequent occurrences and intensity of these events. OMA is engaged with a number of critical infrastructure programs with DHS, classified initiatives, and counterintelligence with the Interagency Security Committee and National Security Council Staff committees.	GSA will continue its role as a voting member, author and contributor to the Interagency Security Committee working groups including the Best Practices and Key Considerations for Enhancing Federal Facility Security and Resilience to Climate-Related Hazards (December 2015) and other relevant documents related to security and extreme weather events.
Ensure climate change adaptation is integrated into both agency-wide and regional planning efforts, in coordination with other Federal agencies as well as state and local partners, Tribal governments, and private stakeholders.	Yes	GSA engages with customer agencies directly to manage climate change risks. As appropriate, GSA includes local stakeholders and extensively uses local climate change adaptation resources as available.	GSA will continue its close partnerships with customer agencies and will translate relevant findings into GSA programs. GSA will continue to translate pertinent findings to support agency programs most relevant to demand planning and supporting GSA's business model, processes and strategic priorities.
Ensure that vulnerable populations potentially impacted by climate change are engaged in agency processes to identify measures addressing relevant climate change impacts.	No	GSA uses this strategy but not among top five priorities. GSA's Environmental Justice Policy includes parameters to address the most vulnerable through the lens of changing climate. In FY 2016 and 2017, the climate risk management team will continue its close coordination with GSA Environmental Justice team.	
Identify interagency climate tools and platforms used in updating agency programs and policies to encourage or require planning for, and addressing the impacts of, climate change.	Yes	GSA is developing a decision-making framework to assist GSA customers with identifying and managing climate-related risks to their supply chains. GSA will also continue requiring contractors for select procurement to address climate adaptation risk management planning as a contract deliverable. Via the Climate Resilience Toolkit, GSA is integrating climate science into statements of work for climate change risk management.	GSA will post the new framework to SFTool by August 31, 2016 and present to relevant agency adaptation groups during Q1-3 of FY 17. GSA will continue requiring climate adaptation planning as contract deliverables as potential contract actions are identified.

Ensure that agency climate adaptation and resilience policies and programs reflect best available current climate change science, updated as necessary.	Yes	GSA engages with Federal science agencies, the USGCRP Adaptation Science Working Group, the Agency Adaptation Planning Working group, and others to obtain information on climate science, demographic change, mission valuation, and emergent adaptation approaches. In addition, GSA supports multiple Critical Infrastructure Security and Resilience (CISR) Interagency Policy Committees (IPC) of the National Security Council such as Extreme Heat, Long Term Drought, Resilient Building Codes, and Wildland Urban Interface. GSA will continue leading supply chain related climate adaptation activities across the federal government.	GSA will continue its close partnerships with Federal science agencies and translate relevant findings into GSA programs. GSA will continue to translate pertinent findings to support agency programs most relevant to demand planning and supporting GSA's business model, processes and strategic priorities.

Appendices

Appendix A: Multimodal Access Plan

Appendix B: Fleet Management Plan

MULTIMODAL ACCESS PLAN
U.S. GENERAL SERVICES ADMINISTRATION (GSA)
Fiscal Year (FY) 2016

Pursuant to EO 13693*, Planning for Federal Sustainability in the Next Decade*

OVERVIEW

Executive Order (EO) 13693, *Planning for Federal Sustainability in the Next Decade*, Section 7(f), requires Federal agencies to consider the development of policies to promote sustainable commuting and work-related travel practices for Federal employees through strategies such as workplace electric vehicle charging, bicycling, and other forms of active commuting; increased telecommuting and teleconferencing; and incentivizing carpooling and the use of public transportation where consistent with agency authority, Federal appropriations and other law. This Multimodal Access Plan (MAP), developed pursuant to the guidance and template issued by the Council on Environmental Quality, describes GSA's current plans for developing sustainable commuting and workplace strategies including:

I. Workplace charging

II. Bicycling and other forms of active commuting

III. Telecommuting and teleconferencing expansion

IV. Carpooling and the use of public transportation

I. Agency Workplace Charging Plan

The Multimodal Access Plan implementing instructions for EO 13693 call for agencies to consider planning for appropriate workplace charging. CEQ's guidance on workplace charging provisions of the Fixing America's Surface Transportation (FAST) Act provides agencies a framework for providing and being reimbursed for workplace charging used by Federal employees and authorized users for their privately owned electric vehicles.

GSA issued Bulletin FMR B-1 on April 29, 2012 re: GSA Electric Vehicle Charging. GSA is working to replace this Bulletin with a new agency order to reflect the recent FAST Act and CEQ guidance. After the new order is issued (est. Q1 FY 2017), GSA will issue implementing guidance for GSA facility managers.

In GSA's 2013 Tenant Satisfaction Survey, GSA asked employees about their interest in using an electric vehicle to commute to work and their willingness to pay for electric vehicle charging at work. Out of 2195 responses to this survey by GSA employees, 285 employees (13%) indicated they already drive a plug-in hybrid or electric vehicle to work or would be interested in doing so in the near future, depending on the cost and availability of charging stations. These employees on average reported they would be willing to pay $3.19 per day for the ability to charge their vehicle at work.

Beyond updating the agency's policy and implementing guidance, in FY 2016 and 2017 GSA will

- designate national and regional leads for workplace charging efforts;
- gauge current GSA employee interest in agency provision of Electric Vehicle Service Equipment (EVSE), using GSA's Commuter Survey, Tenant Satisfaction Survey, and/or other means, and analyze trends in interest since our 2013 survey;
- develop an inventory of current parking facilities and EV charging facilities (including locations appropriate for unmetered use of employee-owned UML1 equipment) at GSA's Regional Office Buildings and Central Office;
- assess and prioritize locations for potential installation of additional EVSE and unmetered UML1-capable circuits;
- begin installing additional EVSE and unmetered UML1-capable circuits where feasible; and
- to the extent that additional EVSE are installed during this time, develop a strategy for outreach to employees and/or visitors (as appropriate) to communicate the benefits of EV use, and availability and location of EVSE at GSA facilities.

II. Agency Bicycling and Active Commuter Plan

The Multimodal Access plan implementing instructions for EO 13693 call for agencies to consider recommendations from the revised Interagency Task Force on Bicycling and Active Transportation report (April 2016) and to offer employees reimbursement for bicycling under the Qualified Transportation Fringe Benefits tax provision.

GSA is developing a Bicycling and Active Commute Program to promote green commuting. In FY 2016 and 2017, GSA will

- designate national and regional program leads for the Bicycling and Active Commute Program;

- gauge nationwide employee interest in bicycling and other forms of active commuting, including related infrastructure needs and anticipated program use (including for bicycle subsidies), through employee surveys and other communications; and
- develop a complete inventory of current bicycle and active commuting infrastructure and programs at GSA's Central Office and Regional Office Buildings, and high-priority changes and additions based on employee feedback.

Infrastructure and program elements to be inventoried and potentially prioritized for expansion or improvement include

- location, type, and condition of bike racks and/or storage rooms;
- location, type, and condition of bike maintenance and convenience facilities (tools, air supply, etc);
- location, type, and condition of shower and locker facilities;
- security and other policies regarding parking of bicycles inside or outside of buildings;
- communication programs to raise awareness of and/or promote bicycling and active commuting;
- inclusion of bicycle and other forms of active commuting as part of agency employees' available online training courses; and
- challenge programs for agency offices to have friendly competitions on bicycle commuting.

Additionally, depending on employee interest, in FY16 and FY17 GSA may develop a work plan to extend the Qualified Transportation Fringe Benefit and/or agency established incentive program to GSA employees who bike to work.

III. Agency Telecommuting and Teleconferencing Expansion Plan

The Multimodal Access Plan implementing instructions for EO 13693 call for agencies to consider planning for the facilitation of activities to increase telecommuting and teleconferencing.

GSA is already a leader among Federal agencies in providing telework and teleconferencing facilities and policies, and works continually to improve them. As of September 30, 2015, 10,365 (out of a total of 11,171) employees were eligible to participate in telework. During FY 2015, 9,848 employees participated in telework.

GSA will continue to monitor and improve its telecommuting and teleconferencing strategy by

- encouraging agency-wide telework days periodically;
- analyzing potential travel savings from improved teleconferencing capabilities;
- providing employees with up-to-date information on the location and operational status of teleconferencing equipment and resources, including telephone and video equipment and online conferencing tools, via GSA's conference-room reservation system, internal web site, and IT status email;
- providing online training on using webinar/video-conference equipment and telework best management practices;
- providing employees with information on potential cost savings from avoided commutes;
- conducting employee surveys on interest in additional telework days relative to current schedules; and
- reviewing potential enhancements to webinar and video-conferencing capabilities.

IV. Agency Carpooling and Transit Plan

The Multimodal Access Plan implementing instructions for EO 13693 call for agencies to consider new strategies to incentivize carpooling and the use of public transportation to and from Federal facilities.

GSA already has an active public transportation program. Every 2 years, GSA conducts a survey of employee commuting patterns to estimate GHG impacts of employee commuting. In January 2015, GSA conducted a survey where approximately 800 DC-area employees responded yes to changing their commutes. More people said they are using Metrorail much more (23%) or a bit more (14%) than using it less (17%) or stopped using it (12%). About twice as many people said they are more frequently riding the bus (28%) and walking (27%), than doing these less frequently (16% walking / 11% bus). 43% said they were driving a car less, while only 14% said more; with even more lopsided decreases (22%) for truck/SUV use compared to increase (6%).

GSA will continue to promote carpooling and the use of transit benefits by

- assessing public transit use using commuter surveys, determining baseline of transit and carpool use by agency employees, and encouraging agency-wide transit and carpool days;
- gauging employee interest in more frequent use of transit and carpools;
- providing employees with information on availability of the public transportation benefit;
- assessing employee interest in carpooling via a commuter survey;
- making an inventory of carpooling programs at CO and ROBs;
- developing a workplan to expand carpooling programs if appropriate and feasible;
- providing employees with information on potential cost savings from reduced costs associated with automobile ownership; and
- employee survey on interest in increased frequency of transit/carpooling use for commuting and local travel between meetings.

U.S. General Services Administration
Fleet Management Plan
Fiscal Year 2016

Table of Contents

U.S. General Services Administration Fleet Management Plan Introduction

On May 24, 2011, the President issued *Presidential Memorandum—Federal Fleet Performance*, directing the U.S. General Services Administration (GSA) to develop and distribute to agencies a Vehicle Allocation Methodology (VAM) within 90 days of the date of the memorandum. On August 22, 2011, GSA released Federal Management Regulations (FMR) Bulletin B-30, *Motor Vehicle Management*. The purpose of the Bulletin is to ensure that agencies "satisfy the requirements of the Presidential Memorandum." The Bulletin requires three actions:

1. Implement a Vehicle Allocation Methodology (VAM): The purpose of the VAM is to identify the optimum fleet inventory "that is most efficient to meet the agency's mission and the identification of resources necessary to operate that fleet effectively and efficiently."
2. Report the VAM Results: Enter inventory data into the Federal Automotive Statistical Tool (FAST) portal.
3. Develop and Submit a Fleet Management Plan: Develop a fleet management plan (FMP) that describes the program for achieving the optimum fleet inventory by December 31, 2015.

Between 2011 and 2015, GSA complied with these requirements with a goal of achieving an optimized internal-fleet inventory. In 2011, GSA reported an inventory of 1,217 internal-fleet vehicles (and the reported optimized fleet at that time was 1,169 vehicles); for fiscal year (FY) 2015, GSA reported an inventory of 967 internal-fleet vehicles; thus, over the five-year period, GSA reduced its fleet inventory by 250 vehicles (21 percent, significantly more than the initial plan for an optimized fleet indicated).

Regarding the VAM process, however, GSA's Office of Inspector General (OIG) released an audit report (A140009/O/R/F15003) on February 20, 2015, that presented two findings:

- Finding 1 – Current vehicle allocation methodology processes may hinder GSA's internal fleet removal and replacement decisions.
- Finding 2 – Current vehicle allocation methodology duties and responsibilities within the Office of Administrative Services could lead to inaccurate vehicle allocation methodology decisions and reports.

Consequently, for the FY 2016 VAM study (conducted between November 2015 and January 2016), GSA has continued to improve its data-gathering and analysis process, as detailed below. At the same time, we have prepared an FMP that documents current and future efforts to improve our fleet management program. Our FAST data statistically enumerates **what** our optimized fleet consists of while the FMP tells **how** we will achieve continuous improvement, including an improved process for vehicle removal and replacement decision-making.

On March 25, 2015, Executive Order (EO) 13693 on "Planning for Federal Sustainability in the Next Decade" was released. It requires that the head of each agency shall, where life-cycle cost effective, beginning in FY 2016, unless otherwise specified:

- determine an optimum fleet inventory (VAM);
- eliminate non-essential vehicles;
- reduce fleet-wide per-mile green-house gas (GHG) emissions (using a baseline from FY 2014) and hit specified targets in 2017, 2021, and 2025;
- acquire and deploy vehicle telematics no later than two years from the date of the EO;
- collect and apply agency fleet operational data obtained through vehicle telematics at a vehicle asset level for all new passenger and light duty vehicle acquisitions and for medium duty vehicles where appropriate;
- ensure vehicle-specific data is accurately accounted for in an agency fleet management information system (FMIS); and
- ensure vehicle-specific data is accurately accounted for in FAST, FMVRS (Federal Motor Vehicle Registration System) and the Fleet Sustainability Dashboard (FleetDASH) system.

As determined by this year's VAM study, GSA's optimum fleet inventory consists of 936 vehicles, which would be a reduction of 31 vehicles from the inventory taken from the beginning of FY 2016. Furthermore, there are opportunities to reduce fleet expenditures by changing the composition of the fleet toward smaller, more fuel-efficient vehicles.

The fleet-wide per-mile GHG baseline emissions and targets for GSA's internal fleet are:

Figure 1: Emissions Statistics and Targets

FY	Standard Fleet-wide Measures	Actual CO_2e/mile
2014	Baseline	413.89
2015	Actual	345.18
	Target Percentages	**Target CO_2e/mile**
2016	2.00%	405.62
2017	4.00%	397.34
2018	6.75%	385.96
2019	9.50%	374.58
2020	12.25%	363.2
2021	15.00%	351.82
2022	18.75%	336.29
2023	22.50%	320.77
2024	26.25%	305.25
2025	30.00%	289.73

The FY 2015 fleet-wide GHG emissions metric (gCO_2e/mile) stands at 345.18, below the 2014 baseline. Indeed, the GSA internal fleet has already achieved the GHG targets through 2021. Nevertheless, GSA will work toward sustaining (and improving upon) its positive 2015 GHG performance measure.

Additionally, EO 13693 directs agencies:

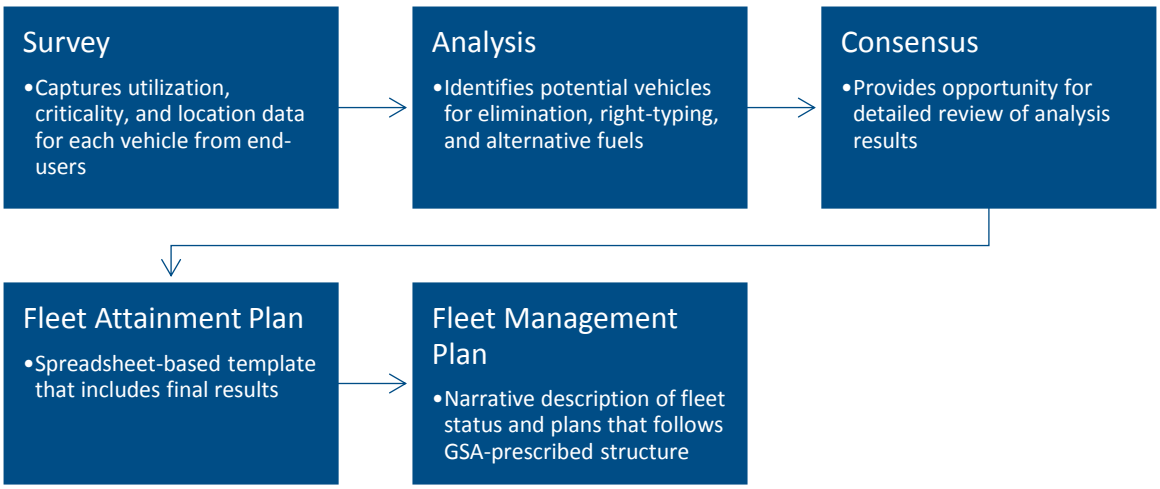
a) To increase the percentage of zero emission and plug-in hybrid vehicle acquisitions in their fleets to comprise 20 percent of all new vehicle acquisitions by 2020 and 50 percent of all new acquisitions by 2025.

b) To plan for appropriate charging or refueling infra-structure by procuring charging stations and, where possible, infrastructure that will allow for vehicle level data reporting capabilities.

The FMP describes the steps GSA is taking to comply with these and other directives.

In sum, with this FMP, GSA is taking steps toward fulfilling both ongoing and new challenges as it moves beyond the 2011 to 2015 fleet-optimization goals and actions to achieving improvements in vehicle data gathering and analysis and fleet-related sustainability objectives. To that end, the GSA VAM study for FY 2016 followed Bulletin B-30 guidance, as required. Moreover, GSA has developed a new and detailed FMP that follows the FY 2016 template available on the FAST portal. **Figure 2** displays the GSA process:

Figure 2: VAM and Fleet Management Plan Process Overview



Survey

GSA compiled its fleet inventory to establish a baseline internal-fleet profile that tracked vehicles individually. The vehicle-by-vehicle inventory data fields included all information specified in B-30, as available.

A draft survey was developed with questions tailored to GSA's fleet program. The questions incorporated all B-30 requirements as well as additional questions to ensure that not only utilization information, but also mission criticality and vehicle-type information were obtained (see Attachment B for the survey questions). Requirements for responding to the survey were developed and communicated to the field by GSA's Office of Administrative Services (OAS) Fleet Manager. Motor vehicle users and Program Offices then completed the survey. GSA sent out 967 surveys to motor vehicle users and realized a 100 percent response rate.

Analysis

The GSA VAM study methodology for FY 2016 used an electronic survey tool called eVAM[1] to provide users with a structured approach for determining the need for vehicles, and, if a need exists, what type of vehicles are appropriate for a given mission. It is automated using MS Excel spreadsheets to enable the efficient processing of vehicle justifications for the entire fleet. It analyzes the two essential vehicle allocation considerations:

a. *Determination of Need* (i.e., how badly is the vehicle needed). Need is ascertained by addressing:
    i. The *criticality* of the work or mission being performed
    ii. The *utilization* of a vehicle or group of vehicles
b. *Determination of Type* (i.e., if a vehicle is needed, what type should be provided).

In sum, eVAM is an automated vehicle justification protocol that applies utilization (defined as miles, hours in use, and trips taken) and survey responses to make recommendations for vehicle actions automatically. The data gathered yields a two-dimensional determination of need, which is visually documented via an eVAM graphic like the one shown in Figure 3 for every vehicle surveyed.

[1] eVAM is a Mercury Associates Inc. proprietary electronic tool designed for VAM studies that conform to B-30 standards and requirements. It applies algorithms that yield recommendations. The next step in the process is for the organization to review the recommendations for reasonableness prior to action.

Figure 3: eVAM Output for a GSA Internal Fleet Vehicle Type

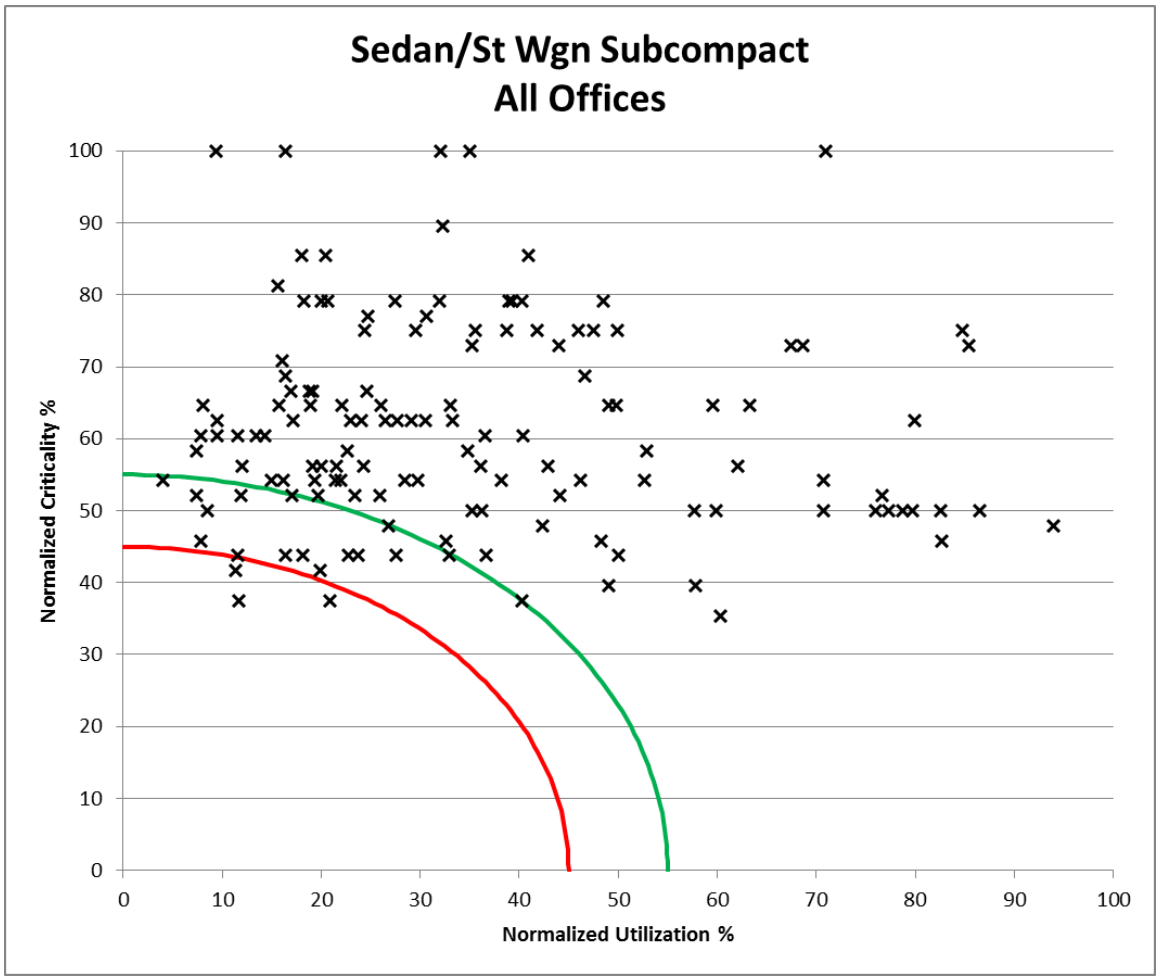


Figure 3 displays three areas: first, an area below the curved red line for vehicles that fail (i.e., recommended for Elimination); second, an area between the red and green lines for vehicles that requires further review and discussion (i.e., labeled as Questionable); and third, an area above the curved green line for vehicles that are deemed justified (i.e., recommended for Retention).

The survey gathered information that included per-vehicle mileage, trips per vehicle, mission requirements, operational terrain/environment, and extensive additional documentation. When the survey information was imported into eVAM, the tool applied weighting parameters and algorithms embedded in the spreadsheet to arrive at a recommended action for each vehicle (i.e., Retain, Eliminate, or Questionable).

Consensus

Each GSA organization was given the opportunity to review the vehicle-by-vehicle recommendations to reach consensus on the respective action to take regarding vehicle retention or removal. During this process, utilization and mission-criticality survey responses were reviewed, as well as information on location, alternative fuel availability, current vehicle type, and vehicle fuel-type.

Fleet Attainment Plan

After final recommendations were input following the consensus process, the eVAM tool exported the statistical information into the Fleet Attainment Plan spreadsheet. The spreadsheet statistically depicts the fleet optimization plan by year.

Fleet Management Plan (FMP)

The following FMP addresses all questions detailed in the GSA-provided template on the FAST portal. Key facts from the Plan include:

- The internal GSA fleet is 100 percent GSA Fleet leased.
- GSA operates a domestic fleet of 967 vehicles and an overseas fleet of 11 vehicles, according to FY 2015 inventory data in FAST.
- In 2011, GSA reported an internal-fleet inventory of 1,217 vehicles; for FY 2015, the total was 967 vehicles; thus, over the five-year period, GSA reduced its internal-fleet inventory by 250 vehicles (21 percent).
- In large part due to this positive outcome, the FY 2015 fleet-wide GHG emissions metric (gCO2e/mile) stands at 345.18, below the 2014 baseline of 413.89.
- The primary sub-organizations of GSA-allocated vehicles are the Public Buildings Service (PBS), comprising 73.7 percent of the fleet, and the Federal Acquisition Service (FAS), comprising 15.5 percent of the fleet.
- Ancillary missions, comprising 10.8 percent of the fleet, fall into two categories: administrative functions (3.1 percent) and the Office of the Inspector General (OIG) - law enforcement (7.7 percent).
- The GSA internal fleet is overseen by the Office of Administrative Services (OAS), which has recently undergone reorganization. Previously, control of the fleet was largely decentralized; however, under the new service-delivery model, OAS will have a stronger regional presence and therefore will have more direct involvement in the day-to-day operation of the agency internal fleet.
- PBS is a landlord and must therefore function as a caretaker for Federal properties across the country, including 481 historic properties.
- PBS requires stake body trucks and pickups up-fitted with utility boxes for tools and work supplies; pickup trucks become “tool boxes” for personnel at sites where they must work.
- All vehicles in GSA’s internal fleet, with the exception of those overseas, are subject to the VAM study process.
- Vehicle use/mission, utilization, and criticality of need are correlated with vehicle type to ensure that the fleet is or will be right-sized and right-typed.
- A number of OIG vehicles scattered across the United States, such as those assigned to investigations, are up-fitted for Law Enforcement (LE) purposes.
- All covered vehicles due for replacement undergo a structured process of evaluation by GSA’s OAS Fleet Manager to ensure that they meet GSA’s acquisition policies, which include locating alternative fuel vehicles (AFVs) in proximity to AFV fueling stations.

- The VAM research process includes gathering information on proximity to AFV fueling stations for each vehicle.
- GSA's OAS Fleet Manager has increased use of the DOE Fleet Sustainability Dashboard, or Fleet DASH, which tracks participating Federal agencies' fleet fuel consumption, GHG emissions, and vehicle inventories.
- Under two pilot projects, PBS has some 30 stations installed for use by GSA or tenants across the United States.
- GSA's internal fleet currently has two EVs and ten PHEVs (plus 354 gasoline-electric hybrids) located in various cities.
- Currently, GSA's telematics plan for its internal fleet has two components: first, regions must be advised of the requirement to acquire telematics for new and replacement-vehicle acquisitions; second, GSA's annual Acquisition Guidance has to be updated to include this requirement. Beginning in FY 2018, the budget for telematics will be part of OAS budget for fleet and other administrative services as the OAS presence in the regions increases and consolidates previously decentralized functions.
- Previously, OAS had difficulty in determining if the necessary funding had been requested for telematics by the various regions. The reorganization to have an OAS presence in each region will alleviate these difficulties in the future.
- The OIG has HTW approval and conforms to policy. For other offices, HTW transportation has been authorized in response to severe weather, such as hurricanes or significant snow accumulation.
- For every acquisition request, the OAS Fleet Manager notes in GSA Fleet's Customer Acquisition Module (CAM) whether the VAM survey has been completed; at the end of the acquisition cycle, a CAM report that includes all notes is generated.
- GSA's internal fleet program uses GSA Fleet's Drive-thru system as its FMIS.
- Only one highlighted cell, for Indirect Costs, reflects a change in FAST reporting that differs from preceding years; GSA's OAS Fleet Manager applied the information contained in FMR Bulletin B-38, Indirect Costs of Motor Vehicle Fleet Operations, to develop and submit its indirect costs.

General Services Administration Fleet Management Plan and Budget Narrative

A. Introduction

(1) Briefly describe your agency's primary/core mission and how your fleet is configured to support it.

The mission of GSA is "to deliver the best value in real estate, acquisition, and technology services to government and the American people." GSA consolidates the buying power of the Federal Government to serve other Federal agencies by obtaining quality products and services at the best available price. To fulfill this mission, GSA operates a domestic fleet of 967 vehicles and an overseas fleet of 11 vehicles, according to FY 2015 inventory data in the Federal Automotive Statistical Tool (FAST); this Fleet Management Plan (FMP) covers only the domestic fleet.

The primary sub-organizations of GSA with allocated vehicles are the Public Buildings Service (PBS), comprising about 74 percent of the fleet, and the Federal Acquisition Service (FAS), comprising about 16 percent of the fleet. PBS furnishes facility and workspace solutions to more than 60 federal agencies and is the largest public real estate organization in the United States. FAS is the lead organization for coordinating the acquisition of products and services (other than real property) for Federal agencies and departments.

The configuration of the fleet, as reported in FAST, is:

Figure 4: FAST FY 2015 Inventory by Vehicle Type

Vehicle Type	Number	Percentage
Sedans/Station Wagons	566	59%
Buses	2	0%
Light Duty 4X2	187	19%
Light Duty 4X4	177	18%
Medium Duty	34	4%
Heavy Duty	1	0%
Totals	**967**	**100%**

As detailed below, each region operates not only passenger vehicles but also functional vehicles that enable personnel to perform maintenance and repair work (e.g., at heating plants) or to transport materials. This requires stake body trucks and pickups up-fitted with utility boxes for tools and work supplies.

(2) Please describe the organizational structure and geographic dispersion of your fleet.

PBS, FAS, and other sub-organizations deliver GSA's services to its Federal customers through 11 regions, each with its own regional headquarters and field offices strategically situated within its designated geographic boundary. Consequently, while overseen by the Office of Administrative Services (OAS), the GSA internal fleet is operationally decentralized, extending across the Central Office and the 11 regions and field offices within the respective regions. The graphic below shows the GSA regions and indicates the geographic dispersion of the fleet:

Figure 5: Map of GSA Regions

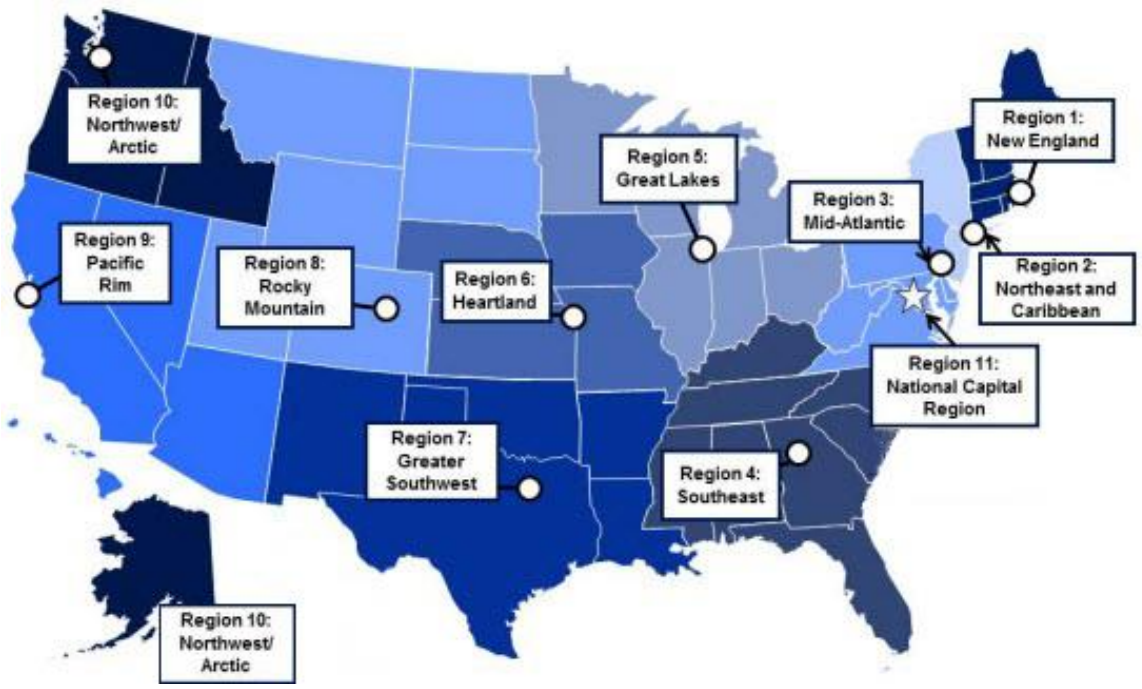


Figure 6: Vehicle Quantities and Percentages by Region

Program	Total	Percentage
0 - Central Office	**107**	**11.1%**
1 - New England (Boston)	**48**	**5.0%**
2 - Northeast & Caribbean (New York)	**43**	**4.4%**
3 - Mid-Atlantic (Philadelphia)	**55**	**5.7%**
4 - Southeast Sunbelt (Atlanta)	**129**	**13.3%**
5 - Great Lakes (Chicago)	**111**	**11.5%**
6 - Heartland (Kansas City, Missouri)	**51**	**5.3%**
7 - Greater Southwest (Fort Worth)	**101**	**10.4%**
8 - Rocky Mountain (Denver)	**40**	**4.1%**
9 - Pacific Rim (San Francisco)	**91**	**9.4%**
10 - Northwest/Arctic (Auburn (Seattle))	**39**	**4.0%**
11 - National Capital Region (Washington, D.C.)	**152**	**15.7%**
Total	**967**	

For a detailed list and description of GSA's organizations and their respective missions, see Attachment A.

(3) Describe your agency's ancillary missions, such as administrative functions, and how your fleet supports them.

Ancillary missions, comprising 11 percent of the fleet, fall into two categories: administrative functions (3 percent) and the Office of the Inspector General (OIG) - law enforcement (LE; 8 percent).
Administrative vehicles typically are passenger sedans, and many are in formal or informal pools and located at office sites within the respective regions. For example, the Office of the Chief Financial Officer has 21 vehicles scattered across the United States, of which 13 are sedans, four are sport utility vehicles (SUVs), three are (light-duty) passenger minivans, and one is a (medium-duty) van. Four of these vehicles (three SUVs and one medium-duty passenger van) are allocated to the Central (Security) Office in Washington, D.C. They fall under continuity of operations planning (COOP) and continuity of Government (COG) requirements; that is, they are intended to transport a leadership team of about 30 personnel if "continuity" action is deemed necessary. The vehicles are up-fitted with red lights, sirens, and communications equipment.

The OIG, which has 14 offices situated across the respective GSA regions, has 74 vehicles. It is an independent organization within GSA. The Office of Investigations within the OIG consists of special agents with full statutory law enforcement authority; they make arrests, execute search warrants, serve subpoenas, and carry concealed weapons. OIG Special Agents are tasked with performing investigations of fraud, waste, and abuse involving GSA programs and operations. OIG Special Agents are on call 24/7, 365 days a year. The vehicles typically are passenger sedans and light-duty SUVs.

(4) Describe how vehicles are primarily used, and how do mission requirements translate into the need for particular vehicle quantities and types.

All vehicles in GSA's internal fleet, with the exception of those overseas, are subject to the VAM study process. Therefore, vehicle use/mission, utilization, and criticality of need are correlated with vehicle type to ensure that the fleet is or will be right-sized and right-typed. The VAM survey database statistically documents the answer to this "mission-requirements" question for each vehicle. Based on information gathered from the survey questions, the eVAM[2] tool provides a statistically based determination of whether a different vehicle type might be appropriate. The GSA OAS Fleet Manager uses this information when vehicles are being replaced to ensure that those in the field are ordering vehicle types that are not only suitable to their respective missions but also contribute to achieving fleet optimization goals.

The PBS mission is "to provide superior workplaces for federal customer agencies at good economies to the American taxpayer" (for a list of PBS offices, see Attachment A). PBS is a landlord and must therefore function as a caretaker for federal properties across the country, including 481 historic properties. This necessitates vehicles for transportation of people and materials. Consequently, each region not only operates passenger vehicles but also functional vehicles to enable personnel to perform maintenance and repair work (e.g.,

[2] eVAM is a Mercury Associates Inc. proprietary electronic tool designed for VAM studies that conform to B-30 standards and requirements. It applies algorithms that yield recommendations. The next step in the process is for the organization to review the recommendations for reasonableness prior to action.

at heating plants) or to transport materials. This requires stake body trucks and pickups up-fitted with utility boxes for tools and work supplies. Pickup trucks become "tool boxes" for personnel at sites where they must work. Because these are work vehicles, they cannot be assigned to a pool; however, many operate across shifts, so they may be in use longer than an eight-hour day. For these vehicles, utilization must be measured not just in miles but in hours on the job, which the Vehicle Allocation Methodology (VAM) research gathers.

PBS Regional Offices may also operate motor pools. Change in fleet size for one such office indicates how the number of personnel at a location may affect the fleet inventory; specifically, the office motor pool has decreased its inventory by eight vehicles because of the number of personnel who no longer work at that location.

FAS business operations fall under four portfolios based on the product or service provided. Integrated Technology Services (ITS); Assisted Acquisition Services (AAS); General Supplies and Services (GSS); and Travel, Motor Vehicle and Card Services (TMVCS). As with PBS, its operations extend across all GSA regions. Most vehicles are sedans; however, a number of vehicles are passenger buses, vans, and minivans that show comparatively high annual mileage because they are used regularly for passenger transportation. For a list of FAS offices, see Attachment A.

Decentralization often extends to vehicle allocation at the local level. For example, an FAS office located at Patrick Air Force Base in Florida has 15 vehicles assigned to it. However, the drivers are all field employees who do not work out of a central location; that is, each is typically the only representative at an assigned location. The fleet point of contact (POC) at the Base provides "on-the-ground" oversight at the operational level.

Additionally, there are a number of OIG vehicles assigned to investigations that are up-fitted for LE purposes.

B. Vehicle Acquisition and Replacement Strategies

(1) Describe your agency's vehicle sourcing strategy and decision(s) for purchasing/owning vehicles compared with leasing vehicles through GSA Fleet or commercially. When comparing the cost of owned vehicles to leased vehicles, you should compare all direct and indirect costs projected for the lifecycle of owned vehicles to the total lease costs over an identical lifecycle. Include a rationale for acquiring vehicles from other than the most cost effective source. Note: Information on calculating indirect cost is contained in FMR Bulletin B-38, Indirect Costs of Motor Vehicle Fleet Operations.

GSA's internal fleet is 100 percent GSA Fleet leased; therefore, a comparison with ownership and a rationale for acquiring vehicles has not been developed.

(2) Describe your agency's plans and schedules for locating AFVs in proximity to AFV fueling stations.

All covered vehicles due for replacement undergo a structured process of evaluation by GSA's OAS Fleet Manager to ensure that they meet GSA's acquisition policies, which

include locating AFVs in proximity to AFV fueling stations. GSA's goal is to acquire the most fuel-efficient, lowest GHG-emitting vehicles possible in support of meeting the requirements of Executive Order 13693: *Planning Federal Sustainability in the Next Decade.*

The VAM research process includes gathering information on proximity to AFV fueling stations for each vehicle. It also looks at vehicle type and recommends an alternative, if appropriate. The information and analysis has helped and will continue to help maximize reductions in petroleum use and GHG emissions. GSA's OAS Fleet Manager will use the current VAM analysis as a guide when reviewing and approving vehicle replacement requests from OAS's internal fleet customers.

GSA's OAS Fleet Manager has increased use of the U.S. Department of Energy (DOE) Fleet Sustainability Dashboard, (FleetDASH), which tracks participating federal agencies' fleet fuel consumption, GHG emissions, and vehicle inventories. The dashboard's interactive graphs show, for example, instances where alternative fuel is well utilized and opportunities for improvement. The GSA OAS Fleet Manager will continue to use the tool to communicate with vehicle users to educate them and help them understand the steps that they can take to increase their use of alternative fuels.

Additionally, Fleet DASH now provides automated missed opportunities (MOs) notifications. MOs occur when drivers of alternative fuel vehicles purchase regular gasoline or diesel when alternative fuel is available at nearby stations that accept the Wright Express (WEX) card. The MO notifications also include additional information about fuel use and provides resources to assist in further increasing the internal fleet customer's alternative fuel use.

(3) Describe your agency's approach to areas where alternative fuels are not available and whether qualifying low greenhouse gas (LGHG) vehicles or ZEVs are being placed in such areas.

Essentially, no matter what location, the GSA internal fleet allocation program seeks to deploy the most fuel-efficient, low green-house gas (GHG) emitting vehicle possible

GSA's OAS takes a two-pronged approach for the deployment of vehicles in locations where alternative fuels are not available. First, OAS is focusing on reducing the size of the vehicles in these locations by deploying the smallest vehicle/smallest engine size possible to meet the mission. Second, OAS strives to deploy advanced lean-burn technology vehicles with LGHG emissions that qualify as alternative fuel vehicles under Section 2862 of the National Defense Authorization Act of 2008.

As discussed above, another concrete action being taken by GSA's OAS Fleet Manager is increased use of the DOE's FleetDASH.

Because PBS is the landlord for GSA's buildings, installing electric vehicle (EV) electrical outlets for plug-in is possible. Under two pilot projects, PBS has some 30 stations installed for use by GSA or tenants across the U.S. One location is the Central Office, which has three plug-in ports in its parking area.

The GSA OAS Fleet Manager will continue to work with the regions to acquire hybrids, PHEVs, and EVs where appropriate. The fleet currently has two EVs and ten PHEVs (plus 354 gasoline-electric hybrids) located in various cities. Based upon the results of the eVAM analysis, there are additional opportunities to add EVs to the fleet at locations where there are existing charging stations.

Additionally, GSA has met with the White House Council on Environmental Quality (CEQ) to discuss plans to deploy ZEVs and charging station infrastructure. In this meeting GSA provided CEQ with the status of the current fleet and GSA's plans to increase the number of EVs in the fleet. GSA efforts to deploy EVs include plans for the acquisition of vehicles, as well as plans to acquire charging stations.

GSA Fleet (part of FAS) has pursued a strategy to reduce the acquisition cost of EVs by negotiating competitive pricing for the model year 2016 Ford Focus Electric. The arrangements that were made with the manufacturer to receive these favorable price concessions require that the vehicles be delivered to and used in "ZEV States" (i.e., States that are participants in the ZEV Multi-State Task Force). These States include California, Connecticut, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, and Vermont. GSA Fleet has been working with agencies (GSA OAS included) to identify vehicles that are replacement eligible (or soon will be) so that orders can be placed before the agreement expires. GSA OAS has identified three vehicles to be replaced through this program. While this is a small start, GSA OAS will continue to work towards the deployment of the EV charging stations that will enable more wide-spread adoption of EVs.

(4) EO13693 requires agencies to reduce greenhouse gas (GHG) emissions as compared to a 2014 baseline. Describe your agency's plans to meet this goal. If funding is required to comply with this mandate, do you have documentation that it has been requested?

The fleet-wide per-mile GHG emissions (using a baseline from FY 2014) and specified targets for GSA's internal fleet are:

Figure 7: GSA Internal-Fleet GHG Emission Targets

FY	Standard Fleet-wide Measures	Actual CO_2e/mile
2014	Baseline	413.89
2015	Actual	345.18
	Target Percentages	**Target CO_2e/mile**
2016	2.00%	405.62
2017	4.00%	397.34
2018	6.75%	385.96
2019	9.50%	374.58
2020	12.25%	363.2
2021	15.00%	351.82
2022	18.75%	336.29
2023	22.50%	320.77
2024	26.25%	305.25
2025	30.00%	289.73

GSA has sought to achieve an optimized internal fleet. In 2011, GSA reported an internal-fleet inventory of 1,217 vehicles; for FY 2015, GSA reported an internal-fleet inventory of 967 vehicles; thus, over the five-year period, GSA reduced its internal-fleet inventory by 250 vehicles (21 percent). In large part due to this positive outcome, the FY 2015 fleet-wide GHG emissions metric (gCO2e/mile) stands at 345.18, below the 2014 baseline of 413.89. Indeed, the GSA fleet already hits the GHG targets through 2021. Nevertheless, GSA will work toward sustaining (and improving upon) its positive 2015 GHG performance measure.

As discussed above, no matter location, the GSA internal fleet allocation program seeks to deploy the most fuel-efficient, least GHG-emitting vehicle possible. OAS takes a two-pronged approach for the deployment of vehicles in locations where alternative fuels are not available. First, OAS is focusing on reducing the size of the vehicles in these locations by deploying the smallest vehicle/smallest engine size possible to meet the mission.

The GSA OAS Fleet Manager will continue to work with the regions to acquire hybrids, PHEVs, and EVs where appropriate. The fleet currently has two EVs, ten PHEVs, and 354 gasoline-electric hybrids located in various cities.

Section 7(e) of the White House's CEQ implementing instructions for EO 13693 states that the Chief Sustainability Officer (CSO) or, as designated by the CSO, a delegate, must

approve new acquisitions and any new waiver requests under section 701 of the Energy Policy Act of 2005. By policy, GSA's OAS has integrated this requirement into its processes. Specifically, initial action taken by GSA has been the creation and promulgation of *FY 2016 Acquisition Guidance for GSA Internal Fleet Vehicles,* which states:

> Pursuant to EO 13693 - Planning for Federal Sustainability in the Next Decade requires including the agency Chief Sustainability Officer (CSO) in approving the acquisition of new vehicles and any vehicle waiver requests under section 701 of the Energy Policy Act of 2005 (see 42 U.S.C. § 6374(a)(3)(E)). Section 701 requires Federal agencies to use alternative fuel in dual fuel vehicles except where the fleet has received a waiver from DOE.

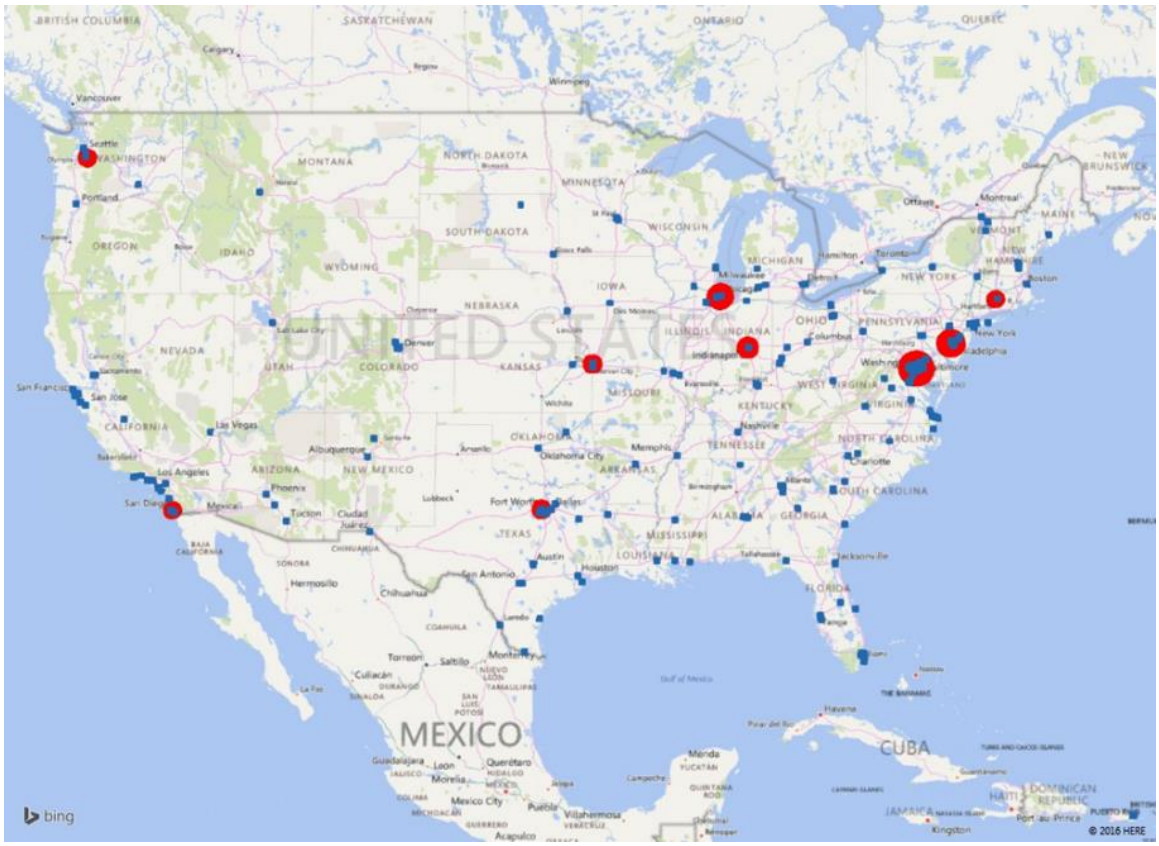
Formal involvement of the office of the CSO in the vehicle acquisition process will give greater weight to OAS efforts to reduce its internal-fleet GHG emissions.

Because the fleet is 100 percent GSA Fleet leased, no special funding request will be required.

(5) EO13693 requires agencies to acquire zero emission vehicles (ZEVs) as an increasing percentage of passenger vehicle acquisitions. Describe your agency's plans to meet this goal. If funding is required to comply with this mandate, do you have documentation that it has been requested?

GSA has conducted an EV infrastructure analysis to determine locations where, if EV infrastructure were deployed, vehicles could be replaced with EVs without negatively affecting mission accomplishment. The process involved geocoding vehicle locations to identify clusters with sufficient numbers of the types of vehicles for which EVs are presently commercially available, namely subcompact, compact, and midsize administrative sedans. Figure 8 shows a geographic representation of the analysis results, with the red circles indicating larger clusters of vehicles.

Figure 8: Potential EV Sites



In some of these locations, there is already *some* EV infrastructure in place; however, more widespread adoption of EVs may necessitate additional charging ports in order to support the fleet. In addition to the 30 stations that PBS has installed for use by GSA or tenants across the U.S., these stations will allow GSA to focus its infrastructure investment in areas with the greatest likelihood of being both operationally and financially feasible (i.e, vehicles that are able to be replaced by EVs while being cost effective at the same time, which is more likely to occur in the ZEV States).

Beside the EV infrastructure analysis that has been completed, the GSA OAS Fleet Manager will continue to work with the regions to acquire hybrids, PHEVs, and EVs where appropriate. The anticipated launch of reasonably-priced extended range EVs (those with more than 200 miles of range per charge with lower total cost of ownership than their conventional counterparts) will add to GSA OAS' ability to meet vehicle user requirements with ZEVs. This will build on the fleet's current complement of two EVs, ten PHEVs, and 354 gasoline-electric hybrids located in various cities.

As noted above, initial action taken by GSA has been creation and promulgation of *FY 2016 Acquisition Guidance for GSA Internal Fleet Vehicles*, which is quoted in the preceding section.

The Guidance also stipulates that "Vehicle requests not meeting the . . . vehicle acquisition guidance will ***NOT*** be ordered."

With regards to funding, OAS has undergone a reorganization which includes Administrative Services in the Regions. GSA will consolidate all regional administrative services to include fleet management into the budget of the Office of Administrative Services. The FY 2018 Budget Guidance provided instructions for the Programs to follow.

> GSA will consolidate all regional administrative services to include copiers, mail management, supply management and supplies, **fleet management,** health units, and fitness centers into the budget for the Office of Administrative Services. Programs should not include any funding for these activities in their program requests. The Office of Administrative Services and the Office of Budget will be working with programs that have Regional operations to document the baseline level of service, identify the necessary future level of service under a consolidated operating model, and determine the funding level for these activities within the Office of Administrative Services budget. **Programs should keep in mind that these support activities previously funded through program operating budgets will now be funded through the program's WCF[3] bill.**

OAS has taken budget requirements into consideration for fleet initiatives outside of vehicle leasing etc. thereby accounting for recent fleet initiatives pursuant to EO 13693.

C. Telematics Related Acquisition Strategies

(1) EO13693 requires agencies to incorporate telematics into the fleet. Describe your agency's plans to meet this goal.

At this early stage, the plan has two components: first, regions must be advised of the requirement to acquire telematics for new and replacement-vehicle acquisitions; second, GSA's annual Acquisition Guidance will be updated to include this requirement. At the time the FY 2016 Guidance was drafted, the telematics requirement details had not yet been promulgated.

We note, however, emerging issues regarding federal fleet-vehicle security insofar as telematics (and other electronic systems) exposes GSA's internal fleet, particularly its LE vehicles, to hacking. GSA's OAS will develop detailed acquisition guidance when possible mitigation actions are identified.

(2) If funding is required to comply with this mandate, do you have documentation that it has been requested?

OAS has undergone a reorganization that includes administrative services in the regions. GSA will consolidate all regional administrative services to include fleet management into the OAS budget beginning in FY 2018.

[3] Working capital fund.

OAS has taken budget requirements into consideration for the telematics initiative and accounted for fleet initiative as the OAS consolidation of the agency internal fleet budget process continues.

(3) Has the agency acquired the telematics system through GSA or directly from a vendor/company? If so, provide the name of the vendor/company. Did the costs of telematics systems acquired directly from the vendor/company exceed those provided through GSA? If so, please provide rationale for the decision.

Not applicable.

(4) Describe the type of telematics technology installed (satellite, cellular or radio frequency identification (RFID)).

Not applicable.

(5) What type of telematics features are installed in your vehicles. Check all that apply from the list below:

Figure 9: Telematics Features

Types of Telematics Devices	Yes	No
GPS Tracking - Fleet managers can monitor the location of their vehicles in real-time by logging on to a user accessible website.		**X**
Engine Diagnostics - Fleet managers can have engine diagnostics reports delivered to their email showing the current condition of the vehicle, odometer readings, idle time, emissions information and speed data.		**X**
Vehicle Monitoring and Driver Identification - Fleet managers can track a driver of every vehicle via the usage of key fobs for the drivers or in-vehicle devices and can track who is, or was, driving any given vehicle at any particular time, as well as limit who can operate which vehicles.		**X**
In Vehicle Recording – This solution uses inward and outward facing cameras to record the driver's behavior as well as the vehicle's surroundings. The device saves the footage from several seconds before and after a sudden movement occurs, such as sudden stop or hard turn.		**X**
Instant Driver Feedback – This system provides an immediate, private, in cabin indication via light activation within the driver's line of sight. The feedback device is designed to track and report harsh breaking, sudden acceleration, cornering/high speed turns, unsafe lane changes and speeding (with a pre-determined speeding threshold).		**X**
Fuel Usage – Information on gallons of fuel and subsequent MPG calculations.		**X**
Other – Describe other service below		**X**

(6) Describe the obstacles encountered, lessons learned, and any experiences or other information that may benefit other agencies. Consideration should be given to the impact that aftermarket telematics may have on vehicle warranties.

Not applicable.

D. Initiatives to Control Fleet Size and Cost

(1) Provide an explanation for any measurable change in your agency's fleet size, composition, and/or cost or if you are not meeting optimal fleet goals (based on agency VAM study results).

Between 2011 and 2015, GSA has achieved its plan for an optimized fleet inventory. In 2011, GSA reported an inventory of 1,217 vehicles (and the reported optimized fleet at that time was 1,169 vehicles); for FY 2015, GSA reported an inventory of 967 vehicles; thus, over the five-year period, GSA reduced its fleet inventory by 250 vehicles (21 percent, significantly more than the initial plan for an optimized fleet).

(2) Describe the factors that hinder attainment of your optimal fleet (e.g., budgetary, other resource issues, mission changes, etc.).

GSA's internal fleet exceeded its plan for an optimized fleet, as detailed above. Further improvements are possible, and GSA's OAS will continue efforts to improve on fleet metrics for inventory and GHG emissions.

(3) Discuss any trends toward larger, less fuel-efficient vehicles and the justifications for such moves.

No trend toward larger, less fuel-efficient vehicles has occurred or is expected. All larger vehicles require justification and those requirements are detailed in the FY 2016 Acquisition Guidelines. The most common larger vehicles operate out of maintenance shops and cannot be downsized due to work requirements. Some OIG vehicles are larger to meet specified mission needs.

(4) Are you aware of and do you consider alternatives (short term rental, pooling, public transportation, etc.) to adding a vehicle to the agency's fleet?

Yes. GSA's FY 2016 Acquisition Guidelines state:

> You must be able to justify a full-time vehicle assignment based on utilization guidelines CFR 41 101-39.301 or demonstrate that other options such as vehicle sharing/pooling by utilizing the Federal Acquisition Service (FAS) Dispatch Reservation Module (DRM) tool and establishing a local motor pool is not a viable alternative.

The OAS internal fleet is in the process of implementing the use of the already available Dispatch Reservation Module (DRM) tool designed and developed by the GSA Federal Acquisition Service (FAS), GSA Fleet. This tool will encourage car sharing, track utilization, reduce overall miles, reduce fuel use, reduce fleet costs, and potentially reduce

the overall fleet inventory. Additionally, use of the DRM tool will encourage smart trip planning thereby assisting in the attainment of an optimal fleet.

All internal fleet vehicles leased by GSA; FAS; GSA Fleet will be identified and input in the DRM tool. Designated Regional Vehicle Controlling Officials (VCO); Office of Administrative Services (OAS) Program Coordinators/Dispatchers, and ALL GSA internal fleet customers identified as vehicle operators will be input in the DRM tool.

(5) Discuss the basis used for your future cost projections (published inflation estimates, historical trends, flat across-the-board percentage increases, mission changes, etc.)

Projections are based on GSA Fleet data and replacement standards because the internal fleet is 100 percent GSA Fleet leased.

E. Vehicle Assignments and Vehicle Sharing

(1) Describe how vehicles are assigned at your agency (i.e., individuals, offices, job classifications, motor pools).

Vehicles are assigned to motor pools, positions, offices, and job classifications. Factors and considerations used in assigning vehicles are set forth in overall policy and in greater detail in the most recently promulgated acquisition policy document. This 2016 policy incorporates GSA's Sustainability Plan, as well as existing legislative mandates and Executive Orders (including EO 13693). Therefore, it stipulates that "the fleet will be configured to be the most fuel efficient, cost efficient, and lowest greenhouse gas (GHG) emitting fleet possible and to serve as a role model for the entire Federal fleet." GSA is continuing to demonstrate its forward-thinking approach by working with CEQ on the deployment of EV infrastructure.

A vehicle replacement request is acknowledgement by the local customer (requestor), local manager/supervisor, and local FM that the existing vehicle's current rate of utilization warrants a replacement vehicle. The requestor must be able to justify a full-time vehicle assignment based on utilization guidelines 41 CFR 101-39.301 or demonstrate that other options such as vehicle sharing are not viable.

OIG agents fall under the GS 1811 classification as criminal investigators. For that classification, GS-15 and below receive LE availability pay, which includes 24/7, 365-days call-out responsiveness. Agents do not receive overtime compensation because the pay/benefits package already addresses availability. Every agent is properly outfitted and deployable, so each agent has a vehicle (a one-to-one ratio).

(2) Describe your agency's efforts to reduce vehicles assigned to a single person wherever possible.

Although each region or office separately establishes its vehicle needs, GSA's OAS is more aggressively promulgating motor pool programs at offices across all regions. The FY 2016 Acquisition Guidelines includes language to that effect:

> ALL vehicle replacement requests will be reviewed by the GSA Head Quarters (HQ) Fleet Manager (FM) prior to a vehicle order being placed. Vehicle requests not meeting the following vehicle acquisition guidance will NOT be ordered:
>
> - A vehicle replacement and/or vehicle acquisition submission by the local customer (requestor) and local manager/supervisor; and approved by the local Fleet Manager (FM), the designated Regional Vehicle Controlling Official (VCO) and the mid-level approver (where applicable), is acknowledgment that:
>   - Alternatives to vehicle acquisition such as public transportation (including taxis), Government shuttles, vehicle sharing/pooling, have been considered and are either not available or are more costly than a Government-leased vehicle.
>   - The existing vehicle's current rate of utilization warrants a replacement vehicle.
>
> You must be able to justify a full-time vehicle assignment based on utilization guidelines CFR 41 101-39.301 or demonstrate that other options such as vehicle sharing/pooling by utilizing the Federal Acquisition Service (FAS) Dispatch Reservation Module (DRM) tool and establishing a local motor pool are not viable alternatives.

GSA Fleet's Drive-thru portal includes the Vehicle Dispatch & Reservation Module (DRM), which allows creation of multiple motor pools. Consequently, dispatchers can create a limitless number of motor pools.

The OAS internal fleet is in the process of implementing the use of the already available Dispatch Reservation Module (DRM) tool designed and developed by the GSA; Federal Acquisition Service (FAS); GSA Fleet. This tool will encourage car sharing, track utilization, reduce overall miles, reduce fuel use, reduce fleet costs and potentially reduce the overall fleet inventory. Additionally, use of the DRM tool will encourage smart trip planning, thereby assisting in the attainment of an optimal fleet.

All internal fleet vehicles leased by GSA; FAS; GSA Fleet will be identified and input in the DRM tool. Designated Regional Vehicle Controlling Officials (VCO); Office of Administrative Services (OAS) Program Coordinators/Dispatchers and ALL GSA internal fleet customers identified as vehicle operators will be input in the DRM tool.

In FY 2016, GSA's OAS will communicate with each region to assess progress toward implementing motor pools locally and to determine whether the DRM tool has appropriate functionality to meet requirements in the field.

Efforts to reduce vehicles assigned to individuals include use of larger work vehicles for multiple shifts. In some cases, personnel are not co-located, so pooling is not possible.

(3) Describe pooling, car sharing, and shuttle bus consolidation initiatives as well as efforts to share vehicles internally or with other Federal activities.

As noted above, a vehicle replacement and/or vehicle acquisition request is acknowledgement by the local customer (requestor), local manager/supervisor and local Fleet Manager (FM) that alternatives to vehicle acquisition such as Government Shuttles, public transit, vehicle sharing/pooling, taxi, etc., have been considered and are either not available or are more costly than a Government-leased vehicle. Where possible, shuttles operate between buildings to meet personnel transportation needs. Pool vehicles at one GSA Region Office are used occasionally by personnel from another agency, but no formal initiatives are in place.

(4) Describe how home-to-work (HTW) vehicles are justified, assigned, and reported, as well as what steps are taken by your agency to limit HTW use.

A complete chapter of the *GSA Internal Motor Vehicle Management* directive is devoted to policy on HTW, and the policy is accessible on the GSA web portal. The OIG does have HTW approval and conforms to policy: "Employees serving in positions essential to the safe and efficient performance of intelligence, counterintelligence, protective services, or criminal law enforcement duties. A one-time-only written request is required for the approval of the Administrator." OIG agents have been authorized for HTW because they are on call 24/7, 365 days a year. For other offices, HTW transportation has been authorized in response to severe weather, such as hurricanes or significant snow accumulation.

Finally, the GSA internal fleet program encourages the use of alternatives other than HTW, such as public transportation where available, trip planning, and car sharing to decrease the number of trips, and the use of desktop technology such as Meeting Space and Webinar.

(5) Does your agency document/monitor the additional cost of HTW use of Federal vehicles? If so, please describe how.

The *GSA Internal Motor Vehicle Management* policy gives direction on the use of a transportation log and reporting the tax fringe benefit to finance.

F. Evidence of Vehicle Allocation Methodology (VAM) Planning

Provide information on the methods used to determine your agency's VAM targets/optimal inventory. (Recommendation #2 from GAO report: GAO-13-659. See FMR Bulletin B-30 for guidance on conducting a VAM study and developing VAM targets).

(1) What is the date of your agency's most recent VAM study? Please describe the results (Add/Reduce/Change vehicle types, sizes, etc.). Have all bureaus been studied?

GSA's OAS is responsible for completing the vehicle allocation methodology for GSA's internal fleet. It conducted its most recent, comprehensive VAM study (all vehicles, all organizational components) between December 2015 and January of 2016. The survey completion rate was 100 percent. All bureaus were studied.

Figure 10 shows the results of the most recent VAM study, with 22 vehicles identified as candidates for fleet reduction (there were an additional nine vehicles that were identified as having already been turned in as part of the normal vehicle replacement cycle). Additionally, there are 206 vehicles that appear to be mismatched to their intended functions, the majority of which being functions in which a smaller vehicles would suffice.

Figure 10: GSA Internal-Fleet VAM Survey Results

Purchase Type	Reduction		Right-typing	
	Count of Units With Savings	Savings	Count of Units With Savings	Savings
Leased	22	$ 64,465	206	$ 213,058
Owned	-	$ -	-	$ -
Total	22	$ 64,465	206	$ 213,058
Grand Total				**$ 277,523**

GSA's OIG Office of Audits conducted an audit (Report Number A140009/O/R/F15003; findings published February 20, 2015) focused on OAS processes to complete GSA's FY 2013 VAM. The OIG documented two findings from its audit:

- Finding 1 – Current vehicle allocation methodology processes may hinder GSA's internal fleet removal and replacement decisions.
- Finding 2 – Current vehicle allocation methodology duties and responsibilities within the Office of Administrative Services could lead to inaccurate vehicle allocation methodology decisions and reports. Consequently, the OIG recommended that OAS:
    - Develop, implement, and document processes to increase Vehicle Utilization Survey response rates and ensure adequate follow-up with non-respondents, while documenting any follow-up activities in the GSA Fleet Drive Thru system.
    - Conduct an assessment to determine the program impact of having numerous vehicle allocation methodology duties and responsibilities performed by one individual. If resource constraints limit the ability to effectively segregate these duties, develop, implement, document, and monitor compensating controls.

For the most recent VAM survey, OAS had weekly reports during the survey period that documented, by organizational component, the number of completions and incompletions and percentage completion. **Figure 11** is an example of the report design.

Figure 11: Example of Report Design of Survey Results

Customer Bureau / Region	Complete	Incomplete	Total Vehicles Assigned	Completion (%)
Public Buildings Service	713	0	713	100
Federal Acquisition Service	150	0	150	100
Office of Inspector General	74	0	74	100
Other	30	0	30	100
Total Vehicles Assigned			**967**	

Because each vehicle asset was tracked, OAS was able to follow up, as needed, to ensure responses. Additionally, the FY 2016 Acquisition Guidelines state that:

> Vehicle requests not meeting the following vehicle acquisition guidance will ***NOT*** be ordered;
>
> - A survey response to the latest Vehicle Allocation Methodology (VAM) has been submitted and the VAM finding warrants a replacement vehicle request.
> - *The lack of a VAM survey response will have an immediate adverse impact on vehicle retention and future acquisition and/or replacement decisions.*

For every acquisition request, the OAS Fleet Manager notes in GSA Fleet's Customer Acquisition Module (CAM) whether the VAM survey has been completed. At the end of the acquisition cycle, a CAM report that includes all notes is generated.

Regarding the second recommendation, GSA contracted with a service firm to support the OAS Fleet Manager in conducting its recent VAM study.

(2) From your most recent VAM study, please describe/provide the specific utilization criteria (miles, hours, vehicle age, or other measures) used to determine whether to retain or dispose of a vehicle? If different criteria were used in different bureaus or program areas, provide the criteria for each.

The same criteria were used across all organization components and for each vehicle.

The GSA VAM study methodology for FY 2016 used an electronic survey tool called eVAM to provide users with a structured approach for determining the need for vehicles, and, if a need exists, what type of vehicles are appropriate for a given mission. It is automated using MS Excel spreadsheets to enable the efficient processing of vehicle justifications for the entire fleet. It analyzes the two essential vehicle allocation considerations:

a. *Determination of Need* (i.e., how badly is the vehicle needed). Need is ascertained by addressing:
   i. The *criticality* of the work or mission being performed;
   ii. The *utilization* of a vehicle or group of vehicles.
b. *Determination of Type* (i.e., if a vehicle is needed, what type should be provided).

In sum, eVAM is an automated vehicle justification protocol that applies weighted parameters to criticality and utilization (defined as miles, hours in use, and trips taken) data to recommend vehicle actions (retain, review/questionable, dispose, change vehicle type) automatically. The data gathered yields a two-dimensional determination of need, which is visually documented via an eVAM scatterplot graphic that incorporates every vehicle for which a survey response is received (as shown in Figure 11).

Figure 12: eVAM Output for a GSA Internal Fleet Vehicle Type

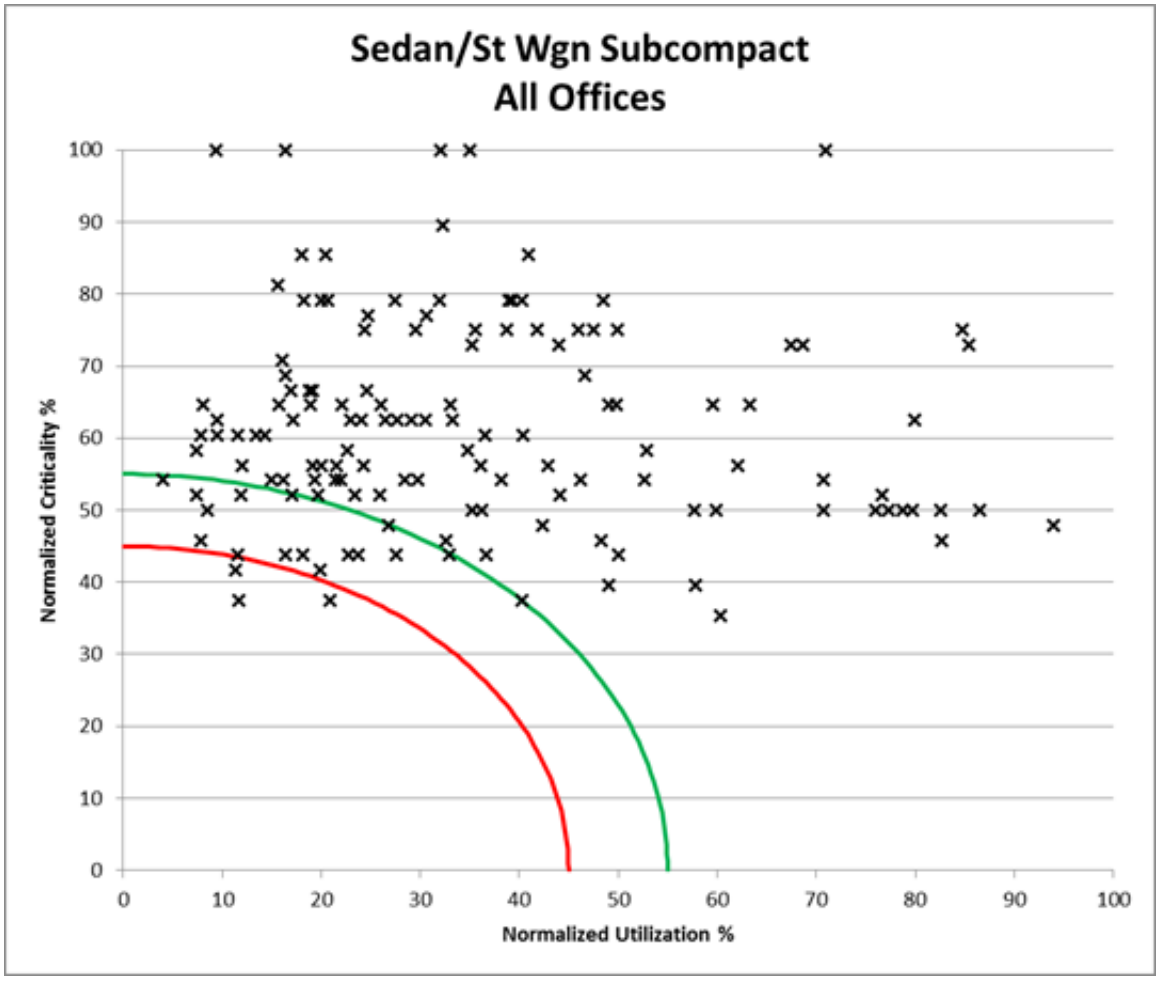


Figure 12 displays a curved red line below which a vehicle fails (i.e., recommended for elimination), an area between the red and a green line for a vehicle that requires further review and discussion (i.e., labeled as questionable), and above the curved green line is for a vehicle that is deemed justified (i.e., recommended for retention).

The survey gathered information that included: per-vehicle mileage; trips per vehicle; mission requirements; operational terrain/environment; and extensive additional documentation. When the utilization and mission-criticality information were imported into eVAM, the tool applied weighted parameters and algorithms embedded in the spreadsheet to arrive at a recommended action for each vehicle (i.e., Retain, Eliminate, or Questionable).

Each GSA Program Office was then given the opportunity to review the vehicle-by-vehicle recommendations to reach consensus on the respective action to take regarding vehicle retention or removal. During this process, utilization and mission-criticality survey responses were reviewed, as well as information on location, alternative fuel availability, current vehicle type, and vehicle fuel-type.

After arriving at final recommendations through the consensus process, the eVAM tool exports the statistical information into the Fleet Attainment Plan spreadsheet. The spreadsheet furnishes the fleet optimization plan by year, which GSA used for its current FAST submission. The Fleet Attainment Plan shows acquisitions and disposals by vehicle type and by fuel type (conventional vs. alternative).

(3) From your most recent VAM study, what were the questions used to conduct the VAM survey (see FMR Bulletin B-30(6)(C)) (if lengthy, provide as an attachment)? If different questions were used by different bureaus or program areas, provide the questions for each. If a VAM survey was not conducted, please describe the methods used to apply utilization criteria to each vehicle in your agency's fleet and collect subjective information about each vehicle that potentially could provide valuable insights/explanations into the objective criteria.

For the questions used to conduct the VAM survey, see Attachment B.

G. Agency-wide Vehicle Management Information System (See FMR 102-34.340)

Federal agencies are to begin collecting asset level data (ALD) beginning October 1, 2016, to be able to report ALD in the October-December 2017 FAST data call. To comply, your agency will need a management information system (MIS) capable of reporting inventory, cost, usage, and other information on a "per vehicle" basis.

(1) Does your agency have a vehicle management information system (MIS) at the Department or Agency level that identifies and collects accurate inventory, cost, and use data that cover the complete lifecycle of each motor vehicle (acquisition, operation, maintenance, and disposal), as well as provides the information necessary to satisfy both internal and external reporting requirements?

Yes, GSA's internal fleet program uses GSA Fleet's Drive-thru system as its FMIS.

(2) Your agency was provided a draft list of 70 ALD data elements. How many of the 70 data elements is your current system able to report on a "per vehicle" basis right now?

All data elements contained within the Drive-thru system that correspond to the list of 70 are able to be reported on a "per vehicle" basis.

(3) Describe your agency's plan for reporting all required ALD elements. What is the timeline?

GSA's internal fleet reporting plan matches the functionality of the Drive-thru system.

(4) If your agency does not currently have a system capable of reporting ALD, describe the steps (documented) that are being taken or have been taken to comply with Executive Orders, regulations, and laws that require such a system.

GSA uses the GSA Fleet's Drive-thru system as its FMIS.

(5) If your agency currently uses telematics systems, does your MIS capture and report all of the data from those devices?

Not applicable.

H. Justification for Restricted Vehicles

(1) If your agency uses vehicles larger than class III (midsize), is the justification for each one documented?

GSA's internal fleet follows its FY 2016 Acquisition Guidance policy, which states:

> Pursuant to Federal Management Regulation (FMR) 102-34.50, you may only obtain the minimum size of a motor vehicle necessary to the mission with consideration to fuel efficiency, body size, engine size and optional equipment; therefore,
>
> - Passenger vehicles will be limited to sub-compact size vehicles that also qualify as low GHG-emitting, more specifically, Standard Item Numbers (SINs) 8C and 8H as well as hybrid or electric vehicles SINs 8E and 8P, to the extent possible, to meet compliance requirements.
> - Compact passenger vehicles will only be considered when there is no mission-appropriate sub-compact vehicle available or if the compact vehicle offers better fuel efficiency and higher GHG advantages. Lower cost is only a consideration when there is no loss of fuel efficiency or increase in GHG emissions over the available sub-compact. No vehicles larger than a subcompact will be ordered without a compelling justification provided by the local customer (requestor) and approved by the local manager/supervisor, local FM, the designated Regional VCO and mid-level approver. The justification should be attached in the Customer Acquisition Module (CAM) and forwarded to the local Fleet Service Representative (FSR) who will review and forward to the Mid-level and/or HQ level, the GSA Fleet Manager, for final approval.
>
> Submission of a justification is not assurance of approval. In no case will a passenger vehicle size exceed class III (midsize).

The OIG has justification for larger vehicles (e.g., vans) for surveillance purposes and for firearms instructors (SUVs) and for computer crimes agents (minivans).

Through the VAM study survey, GSA documents use/mission, utilization, and criticality of need by vehicle type to ensure that its internal fleet is or will be right-sized and right-typed. Consequently, through the survey information, GSA has documented justification for each vehicle in its internal fleet.

(2) Does your agency use the law enforcement (LE) vehicle classification system described in GSA Bulletin FMR B-33? If not, why not?

GSA's OIG has LE vehicles but does not use the B-33 classification system.

(3) If your agency reports limousines in its inventory, do they comply with the definition in GSA Bulletin FMR B-29?

GSA's internal fleet does not have limousines in its inventory.

(4) For armored vehicles, do you use the ballistic resistance classification system of National Institute of Justice (NIJ) Standard 0108.01, and restrict armor to the defined types?

GSA's internal fleet does not have any armored vehicles in its inventory.

(5) Are armored vehicles authorized by appropriation?

GSA's internal fleet does not have any armored vehicles in its inventory.

I. Impediments to Optimal Fleet Management

(1) Please describe the obstacles your agency faces in optimizing its fleet.

Although cooperation across the regionally dispersed fleet continues to improve, the VAM and focus on changes to fleet composition represent significant cultural challenges. The challenges extend to individual employees, who are asked to use public transportation, choose teleconferencing over driving, etc. These are behavioral adjustments that take time and ongoing communication.

Previously control of the budget was a significant barrier to fleet optimization. The OAS Fleet Manager lacked insight into the regional budgets which – like the fleet itself – were decentralized. GSA's OAS worked with the Office of Budget to develop an internal policy to address the fleet budget process. As a result, OAS has undergone a reorganization which includes Administrative Services in the Regions. GSA will consolidate all regional administrative services to include fleet management into the OAS budget. The FY 2018 Budget Guidance provides instructions for the Programs to follow.

> GSA will consolidate all regional administrative services to include copiers, mail management, supply management and supplies, fleet management, health units, and fitness centers into the budget for the Office of Administrative Services. Programs should not include any funding for these activities in their program requests. The Office of Administrative Services and the Office of Budget will be working with programs that have Regional operations to document the baseline level of service, identify the necessary future level of service under a consolidated operating model,

and determine the funding level for these activities within the Office of Administrative Services budget. **Programs should keep in mind that these support activities previously funded through program operating budgets will now be funded through the program's WCF bill.**

OAS has taken budget requirements into consideration for fleet initiatives outside of vehicle leasing etc. thereby accounting for recent fleet initiatives pursuant to EO 13693.

(2) Please describe the ways in which your agency finds it hard to make the fleet what it should be, operating at maximum efficiency.

The GSA OAS Fleet Manager is working toward having knowledgeable and empowered regional VCOs who are focused on management of the internal fleet in place. The goal is for regional VCOs to have the knowledge and authority to take a more active role in implementing rules and regulations. This is an ongoing effort.

As OAS expands its regional presence, additional training may be required to ensure that VCOs are up to date.

(3) If additional resources are needed, (such as to fund management information system implementation or upgrades, or to acquire ZEVs, or LGHG vehicles, or install alternative fuel infrastructure) have they been documented and requested? Do you have a copy of this documentation? (Do not attach or furnish unless requested).

As noted above, The Office of Administrative Services (OAS) has undergone a reorganization which includes Administrative Services in the Regions. GSA will consolidate all regional administrative services to include fleet management into the budget of the Office of Administrative Services.

OAS has taken budget requirements into consideration for fleet initiatives outside of vehicle leasing thereby accounting for recent fleet initiatives pursuant to EO 13693.

(4) Describe what specific laws, Executive Orders, GSA's government-wide regulations or internal agency regulations, budget issues, or organizational obstacles you feel constrain your ability to manage your fleet. Be specific and include examples. If you have a solution, describe it and indicate whether we can share the solution with other agencies as a potential best practice.

As noted above, the budget is decentralized insofar as it is distributed to the regions. This is a significant obstacle to ongoing efforts to improve the management of GSA's internal fleet.

FMR Bulletin B-33 does not work effectively for GSA's OIG fleet. A fourth category needs to be added for this unique governmental entity. Moreover, the law is clear that exemption for HTW applies for GS 1811s.

A requirement of EO 13693 is to include telematics on GSA's internal-fleet vehicles where life-cycle cost appropriate; however, security issues have been raised regarding hacking into the electronic systems of vehicles. This represents a significant security exposure, particularly for LE and emergency vehicles.

J. Anomalies and Possible Errors

(1) Explain any real or apparent problems with agency data reported in FAST.

No real or apparent problems exist with GSA's internal fleet data as reported in FAST.

(2) Discuss any data fields highlighted by FAST as possible errors that you chose to override rather than correct. Examples would be extremely high annual operating costs or an abnormal change in inventory that FAST considers outside the normal range, or erroneous data in prior years causing an apparent discrepancy in the current year.

The GSA OAS Fleet Manager did not override any possible errors.

(3) Explain any unresolved flagged, highlighted, or unusual-appearing data within FAST.

Almost all highlighted cells in FAST's Data Quality and Consistency Report, following final approval and submission of data, reflect changes in fleet composition resulting from steps taken to achieve an optimized fleet. Only one highlighted cell, for Indirect Costs, reflects a change in reporting that differs from preceding years. GSA's OAS Fleet Manager applied the information contained in FMR Bulletin B-38, Indirect Costs of Motor Vehicle Fleet Operations, to develop its indirect costs. As another step by GSA to improve the management of its internal fleet, that expenditure has now been determined and entered into FAST as a fleet operating cost.

K. Summary and Contact Information

(1) Who should be contacted with questions about this agency fleet plan? (Provide the name and contact information for the agency headquarters fleet manager and the person preparing this report if different)

Maureen McKenna
General Services Administration (GSA)
Office of Administrative Services (H)
1800 F Street, NW
Washington, DC 20405
(202) 501-0024 Office
maureen.mckenna@gsa.gov

(2) Indicate whether the budget officer participated in the VAM and A-11 processes. (Provide the name and contact information for the budget office reviewing official).

JoAnna Balamaci
General Services Administration (GSA)
Office of the Chief Financial Officer (CFO)
Office of Budget (BB)
1800 F Street, NW
Washington, DC 20405
joanna.balamaci@gsa.gov

(3) Indicate whether the Chief Sustainability Officer participated in the VAM, vehicle planning, and vehicle approval processes. (Provide the name and contact information for the CSO reviewing official).

The Office of the CSO did not participate in the VAM.

The FMP has been provided to the Office of the CSO.

The office of the CSO will participate in the vehicle approval process, as GSA's "Acquisition Guidance" for its internal-fleet vehicles states:

> Pursuant to E.O 13693 - Planning for Federal Sustainability in the Next Decade requires including the agency Chief Sustainability Officer (CSO) in approving the acquisition of new vehicles and any vehicle waiver requests under section 701 of the Energy Policy Act of 2005 (see 42 U.S.C. § 6374(a)(3)(E)). Section 701 requires Federal agencies to use alternative fuel in dual fuel vehicles except where the fleet has received a waiver from DOE. As appropriate, CSOs may develop an approval or waiver process in aggregate or for each transaction.
>
> - Vehicles used in investigative and law enforcement activities are exempt from vehicle size requirements only if equipped for high speed pursuit as required by mission. However, the most fuel efficient and lowest greenhouse gas emitting of the vehicles equipped for high speed pursuit, should be chosen, when

multiple high speed pursuit vehicles are available that meet mission requirements.

- Where alternative fuel is available within 5 miles or a 15 minute drive of the vehicle's garage location or normal route, the vehicle acquired must be an alternative fuel vehicle (AFV) and alternative fuel must be used instead of petroleum to the maximum extent possible. Customers should review their requisition requests against DOE's alternative fuel locator prior to placing orders. If alternative fuel is not available in your location, a low GHG-emitting vehicle achieving maximum fuel efficiency will be selected. Vehicles used in investigative and law enforcement activities are exempt from this requirement only if equipped for high speed pursuit as required by the mission.
- Vehicles will be sized and equipped for the typical requirement, not the rare exceptional need.
- All SUVs and 4x4 trucks require a compelling mission related justification that is provided by the local customer (requestor) and approved by the chain of command - local supervisor/manager, local FM, designated Regional VCO. The justification is attached in the CAM and forwarded to the local FSR who will review and forward to the mid-level and HQ level, the GSA Fleet Manager, for final approval.
- Requests for trucks must have a cargo or tool carrying requirement that cannot be met with a more fuel efficient vehicle.
- When selecting an SUV or Truck, Pursuant to EISA 2007 Section 141, requestors should look to acquire low greenhouse gas emitting vehicles.

Attachments

Attachment A: GSA Organization

Office of the Administrator

The administrator's office oversees the operations and management of GSA.

Federal Acquisition Service

FAS supports the mission of government agencies by ensuring a positive, efficient, and compliant buying experience. The following offices fall under FAS:

- Office of Strategy Management (QP)
- Office of Integrated Award Environment (QD)
- Office of General Supplies and Services (QS)
- Office of Travel, Motor Vehicle, and Card Services(QM)
- Office of Integrated Technology Services (QT)
- Office of Assisted Acquisition Services (QF)
- Office of FAS Financial Services (BF)
- Office of the Chief Information Officer (IQ)
- Office of Customer Accounts and Research (QC)
- Office of Acquisition Management (QV)
- Regional Commissioner (one per region) indirectly report to the FAS Commissioner

Public Buildings Service

PBS provides superior workplaces for federal customer agencies at good economies to the American taxpayer. The following offices fall under PBS:

- Office of Acquisition Management
- Office of Client Solutions
- Office of Design and Construction
- Office of Facilities Management & Services Programs
- Office of Leasing
- Office of Real Property Asset Management
- Public Buildings Service Commissioners

Office of Government-wide Policy

OGP ensures that government-wide policies encourage agencies to develop and use the best and most cost-effective management practices for the conduct of their specific programs.

Office of the Chief Financial Officer

OCFO ensures that GSA operates in a compliant and efficient manner by providing accurate, cost-effective financial and performance analysis, reporting, and advice.

Office of Human Resources Management

OHRM works to attract, motivate, develop and retain GSA employees through the implementation of effective programs, policies, and operations regarding human capital.

GSA IT GSA IT pursues new ways of applying computing and communications technology to the practical problems of information management in order to reduce the cost and improve the quality of government services, reduce technology risk, and share the results of projects throughout the federal sector.
Office of Administrative Services OAS provides internal administrative services and manages FOIA requests, internal policies, executive correspondence, and workplace initiatives.
Office of Congressional and Intergovernmental Affairs OCIA serves as adviser to the administrator and supervises and maintains agency liaison with all members of Congress and congressional committees.
Office of Citizen Services and Innovative Technologies OCSIT serves as the nation's focal point for information and services offered by the federal government.
Office of Communications and Marketing OCM focuses on conveying information about GSA to federal employees and external audiences, including the media, agency customers, stakeholders, and the American public.
Office of Small Business Utilization OSBU promotes increased access to GSA's nationwide procurement opportunities.
Office of General Counsel OGC provides sound and timely legal advice and representation to GSA clients to enhance their ability to help federal agencies better serve the public by offering, at best value, superior workplaces, expert solutions, acquisition services, and management policies.
Office of Civil Rights OCR ensures equal opportunities and nondiscrimination in GSA programs and activities.
Office of Mission Assurance OMA ensures that GSA maintains a constant state of readiness to perform its essential functions in response to emergencies, and prepares for the swift resumption of normal operations during emergency situations.
Office of Inspector General OIG promotes economy, efficiency, and effectiveness within GSA and works to prevent and detect fraud, waste, and abuse in the agency's programs and operations.
Board of Contract Appeals BCA hears and decides contract disputes between government contractors and executive agencies.

Attachment B: VAM Survey Questions

1) Please enter your contact information (i.e., the person who is filling out this survey).

2) To which region are you assigned?

3) If you selected "other" for the previous question, please specify.

4) To which organization are you assigned?

5) If you selected "other" for the previous question, please specify.

6) Please enter your vehicle information (i.e., the vehicle garaged location address).

7) Can this vehicle be turned in for disposal or reassignment because it is in excess of your current requirements?

8) What is the current odometer reading? (No comma)

9) When was this odometer reading taken?

10) How many weeks per year is this vehicle typically used? (Based on three years of operations when possible; if this is a new replacement vehicle, average the usage based upon the new vehicle and the vehicle that was turned in.)

11) When in use, how many days per week is this vehicle typically used?

12) When in use, how many hours per day is this vehicle typically used? (This is the entire time that the vehicle is away from its normal overnight parking area.)

13) How many trips per week does this vehicle average? (A trip begins when the vehicle leaves the parking area where the vehicle is normally stored overnight and ends upon its return to that location.)

14) How many hours does a typical trip take for this vehicle?

15) How many vehicles of this type are at this location?

16) Is this a backup or spare vehicle?

17) What types of work are typically supported by this vehicle? (Mark all that apply)

18) If you selected "other" for the previous question, please specify.

19) Does this vehicle carry tools or equipment that must be carried in order to perform your job? (Equipment is anything more than a briefcase and/or a laptop case)

20) Is it feasible to transfer tools and/or equipment carried by this vehicle to another vehicle in less than 15 minutes?

21) Is pooling/sharing of this vehicle practical at your specific work location? (Select all that apply)

22) Why is pooling/sharing not practical?

23) If this vehicle were unavailable, would it be practical to: (Check all that apply)

24) Is this the ONLY vehicle available at this location?

25) How many GSA internal fleet leased vehicles of any type are at this location?

26) Is this vehicle in a GSA internal fleet motor pool?

27) Is this vehicle in FAS' Dispatch Reservation Module (DRM) System?

28) Are there any other Federal Government Agencies/Departments within walking distance (approximately 1/4 mi.) of your location?

29) How many other Federal Government Agencies/Departments are within walking distance of your location?

30) Please select the criticality category that best describes this vehicle:

31) In your opinion how would elimination of this vehicle affect your mission?

32) Which of the following types of vehicles do you need?

33) Please select how this vehicle is used:

34) Select the cargo/equip normally carried.

35) How many people does it normally carry? (Normally is more that 50% of the time)

36) Is this vehicle restricted to a campus/base/compound?

37) Do you need to tow trailers with this vehicle?

38) What is the weight of the cargo/equipment that is carried?

39) How bulky is the cargo/equipment that is carried?

40) Is 4 wheel drive required to perform your duties?

41) Please justify your need for 4 wheel drive.

42) What climate region does this vehicle normally operate in?

43) On what type of terrain does this vehicle typically travel?

44) What is the current condition of the vehicle?

45) Estimate how often is this vehicle "out-of-service" in a month, on average:

46) If you answered "Yes and will not be replaced" to the previous question, please enter information relevant to the disposal of the vehicle.

47) If you answered "Already turned in and was not replaced" to the previous question, please enter information relevant to the disposal of the vehicle.

48) If you answered "Already turned in and was replaced" to the previous question, please provide the vehicle ID number of the replacement vehicle.

49) Survey End. Please add any additional comment(s) that you may have regarding this vehicle (optional).

U.S. General Services Administration

FY 2014 Climate Change Risk Management Plan

June 2014

with Progress Updates as of March 2015

Table of Contents

List of Acronyms

CEQ	Council on Environmental Quality
COP	community of practice
DHS	Department of Homeland Security
EO	Executive Order
ESF	Emergency Support Function
EV	electric vehicle
FAS	Federal Acquisition Service
FCDDI	Federal Data Center Consolidation Initiative
FERC	Federal Energy Regulatory Commission
GHG	greenhouse gas
GIS	Geographic Information Systems
GSA	U.S. General Services Administration
HEV	hybrid electric vehicle
IEQ	indoor environmental quality
IRS	Internal Revenue Service
IT	Information Technology
MWCOG	Metropolitan Washington Council of Governments
NASA	National Aeronautic and Space Administration
NCPC	National Capital Planning Commission
NOAA	National Oceanic and Atmospheric Administration
OMA	Office of Mission Assurance
PBS	Public Buildings Service
USDA	U.S. Department of Agriculture
USGCRP	U.S. Global Change Research Program

Executive Summary

The U.S. General Services Administration (GSA) understands that climate change could affect our ability to fulfill the agency's mission, operate our facilities, provide products and services, and meet policy and program objectives. As part of our responsibilities under Section 8(i) of Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance,* and Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*, GSA is committed to securing Federal property and supply chain investments, which are critical to meeting our objectives in supporting the delivery of government services to the public.

GSA's adaptive capacity is defined by its ability to include climate factors in its management processes. By implementing the actions described in this Climate Change Risk Management Plan (hereafter referred to as the "Plan"), GSA will enhance its capacity by laying essential groundwork to incorporate climate change adaptation planning into the agency's strategic approach to enterprise risk management. The results of the planned activities will position GSA to provide customer agencies with innovative, expert solutions to the myriad of challenges posed by climate change risks in a dynamic policy and fiscal environment. GSA's national service lines, the Public Buildings Service and the Federal Acquisition Service, offer a unique network to facilitate an integrated national strategy for climate change adaptation planning, as well as to coordinate the federal effort with state, local, and regional officials. This network, combined with the lessons and data gained from prior fiscal year priority actions and future planned actions, will be invaluable to GSA's success in building a robust capacity to manage risk from climate change. Because it is not possible to predict the precise timing, frequency, or severity of future risks, positioning GSA with robust, resilient capacity is imperative to successfully manage risks from climate change.

This plan summarizes GSA's approach, accomplishments, plans, actions and coordination activities to evaluate the agency's climate change risks and vulnerabilities to manage both the short and long-term effects of climate change on the agency's mission and operations. In FY14 and FY15, GSA will focus on these four action items that continue to build better understanding and address the risks and opportunities brought on by climate change:

1. Update the agency Climate Change Risk Management Plan, per the requirements of Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*.
2. Initiate an update to agency and service-level vulnerability assessments based on the Third National Climate Assessment. This will lead to a subsequent update of the agency Climate Change Risk Management Plan in FY15.
3. Evaluate responses to GSA's 2013 Request for Information to assess the marketplace for climate change adaptation services and determine any next steps GSA should take to support federal agencies in acquiring these services.
4. Deliver climate change adaptation training to GSA organizations by request.

A summary of GSA's current understanding of the challenges and opportunities posed by climate change to GSA's mission, program and operations is provided in Section 3.1. For more information on the agency's FY12-13 activities, please refer to GSA's FY13 Plan.

This Plan is a living document that will be updated within one year of the publication of each quadrennial National Climate Assessment report, or more frequently, as necessary. GSA's Climate Adaptation and Resiliency Team (Adaptation Team) and senior leadership will review and update the Plan in coordination with the Strategic Sustainability Performance Plan Team. GSA will post a copy of this Plan on InSite (the employee intranet) and make it available to the public as directed by the White House Council on Environmental Quality and the Office of Management and Budget.

1. Introduction

We know that our climate is changing. While it is essential to try to mitigate this change by reducing greenhouse gas (GHG) emissions[1], inertia in the climate system due to past GHG emissions means that some further climate change is unavoidable, and we must assess the climate risks that we face so we can plan to adapt.

This Plan focuses on adapting to a changing climate. Executive Order (EO) 13653, *Preparing the United States for the Impacts of Climate Change,* defines adaptation as an "adjustment in natural or human systems in anticipation of or response to a changing environment in a way that effectively uses beneficial opportunities or reduces negative effects."

Climate change adaptation is a qualitative, iterative process that addresses risk vulnerability, adaptive capacity, preparedness[2], and resiliency[3]. It involves not only coping with immediate problems more efficiently, but also establishing and maintaining a reserve sufficient to cope with multiple (or more severe) stressors in anticipation of future changes. In essence, climate change adaptation requires building a robust capacity to manage risk.

GSA owns or leases 9,011 assets, maintains an inventory of more than 378 million square feet of workspace for 1.1 million federal employees, preserves more than 647 historic properties, and provides 11 million different products and services totaling more than $54 in annual sales. Although predicting the precise occurrence of future climate risks is impossible, climate change could affect GSA's ability to fulfill our mission, operate our facilities, provide products and services, and meet policy and program objectives. GSA needs to develop robust, resilient capacity to manage climate change risks and secure the federal real property and supply chain investment, particularly during this era of heightened environmental and fiscal challenges.

Adaptive Management Approach

As noted in CEQ's October 2010 *Progress Report of the Interagency Climate Change Adaptation Task Force*, "adaptation plans must allow for a 'feedback' mechanism, whereby new knowledge and information, lessons learned (including costs of implementation), and modified priorities can be accounted for and incorporated into the ongoing adaptation process." This feedback-based process is often referred to as adaptive management.

GSA is taking an adaptive management approach to its planning by instituting an incremental, iterative, and integrated process that builds capacity through climate literacy and incorporates

[1] Part of the U.S. General Services Administration (GSA) mitigation strategy, for example, focuses on making federal buildings more energy-efficient and procuring energy-efficient products (e.g. ENERGY STAR qualified) as methods to reduce energy consumption, and therefore reduce GHG emissions.
[2] "Preparedness" means actions taken to plan, organize, equip, train, and exercise to build, apply, and sustain the capabilities necessary to prevent, protect against, ameliorate the effects of, respond to, and recover from climate change related damages to life, health, property, livelihoods, ecosystems, and national security (EO 13653).
[3] "Resilience'' means the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions (EO 13653).

organizational learning into our business model. The intent is to make the agency robust and to operationalize adaptation immediately into existing processes. GSA uses an adaptive management process to gather, review and analyze information and respond in ways that promote flexible agency decision-making.

This approach is particularly appropriate for the agency because addressing climate risks is currently a non-routine problem set and yet these risks will impact complex systems over an extended period of time. Using a risk management approach, GSA is: considering all the threats and opportunities of incremental climate change and variability; piloting tailored organizational adaptation and collaboration methods; sharing lessons learned inside and outside GSA; fostering an internal community of practice (COP) that has moved from familiarity to understanding; and refining our adaptation based on experience and new information.

2. Policy

GSA recently updated its Climate Change Adaptation Policy Statement, reaffirming the agency's commitment to adaptation planning and the requirements outlined in EO 13653. See Appendix A to read the updated statement.

3. Federal Agency Planning for Climate Change Related Risk

3.1. Climate Change Related Risks for GSA

The impact of gradual, incremental climate change on GSA's statutory mission is characterized differently from acute extreme weather incidents, which are handled reactively. Demand planning for changing climate risk factors supports the changing mission of the federal customers. If GSA is not able provide supplies, services, or spaces that are climate-resilient over time so that federal customers can operate at full capability, much more is at risk than simply GSA's mission. GSA must work with its customers to understand how a changing climate, in conjunction with other socio-economic and demographic trends, will affect customer agency missions. This understanding can inform an assessment of mission criticality, and will help GSA to prioritize customers' risk management needs.

Sites and facilities with specialized functions that are challenging to replace, relocate or interrupt such as form processing, data centers, labs, courthouses, and land ports of entry (LPOE's), will need additional care in design and maintenance over time to maintain services and supplies for the federal customer. In addition to designing new facilities for climate resilience over their lifetime, federal customers should also take account of the potential impacts of climate change on operating budgets if, for example, energy costs increase as the temperature rises.

In FY13, GSA's Adaptation Team broadly assessed the agency's vulnerability to chronic, incremental climate impacts using a method tailored to our mission, which identified key threats, prioritized activities that reduce vulnerabilities, set strategic priorities for ensuring resilience, and

built preparedness capabilities. The assessment looked at impacts GSA-wide, at the Public Buildings Service (PBS)-level, and at the Federal Acquisition Service (FAS)-level. Below are identified impacts on the climate change-related impacts on the risks to the agency's ability to accomplish its missions, operations, and programs.

GSA-Wide

As part of the federal climate change adaptation strategy, GSA is committed to securing federal property and investments, which are critical infrastructure supporting the delivery of government services to the public. Therefore, much of the priority climate risks and opportunities are within the FAS and PBS organizations, but some vulnerabilities impact the agency as a whole.

Health and Safety

Indoor environmental quality (IEQ) and site access are the biggest health and safety risks to the GSA workforce that occupies agency office space. All GSA regions are impacted by this risk. Monitoring known vulnerable sites, better understanding the sources of indoor environmental contaminants, and controlling them as risks emerge are all opportunities to address IEQ issues.

Infrastructure and Support Systems

As agency workplaces become increasingly flexible and mobile, their dependency on GSA information technology infrastructure, building systems, and workplace strategies and design that support mobility are becoming more mission-critical. Currently, GSA has 15 data centers located in regional office buildings and other locations. Through the Federal Data Center Consolidation Initiative (FDCCI), we established a goal to consolidate these 15 into three major data centers located in Chantilly, VA, Fort Worth, TX, and Kansas City, MO. All three locations are particularly vulnerable to heat waves in terms of the infrastructure that supports real property, such as transit, utilities (electric, gas, and telecommunications), water and wastewater, and business and commerce. All have a medium to high sensitivity in their ability to accommodate projected climate impacts through 2100 with minimal disruption or costs. GSA has opportunities to ensure the major data centers are not in particularly vulnerable locations or the facilities are equipped to accommodate projected climate impacts with minimal consequences.

Social Resiliency

All people, including federal employees, will be vulnerable to the effects of climate change, including heat waves, droughts, precipitation extremes, intense storms, and sea level rise. These changes are already having an impact on workplace health and safety, and disrupting access to federal sites or systems. The federal workforce will need to build capacity to cope with, and adapt to, climate change impacts within the workplace. This will be challenging, as climate risk management is often complex and requires a coordinated effort. By enhancing capacity to deal with climate change impacts in the workplace, GSA's climate change adaptation planning can build and foster social resilience among the federal workforce, bolstering the critical resource of human capital.

Environmental Justice

GSA must respond to environmental justice issues that impact both our federal customers and the vulnerable communities that are affected by our activities. This responsibility is mandated by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. As our customers identify vulnerable mission critical sites and supply chain components, GSA will partner with them to identify and avoid maladaptation, actions that increase vulnerability to climate risks rather than reducing them, to vulnerable communities. Real property adaptation actions may vary across a spectrum of protection, accommodation, or retreat. Supply chain adaptation actions may vary across a spectrum of planning for disruption, minimizing damage, or damage control. Preparing agency staff to have the capability, confidence, and capacity to successfully implement this emergent aspect of risk management requires ongoing attention.

Public Building Service

The PBS mission is to provide superior workplaces for federal customer agencies at good economies to the American taxpayer. Climate impacts may increase the costs of maintaining excellent conditions of real property. Mission delivery for PBS is affected by federal policy, variable funding levels, increasing temperatures, changing precipitation patterns, more intense storms, and rising sea levels. PBS can expect higher summer temperatures and a subsequent need to minimize cooling loads. Additionally, buildings may also need to withstand lower and longer-lasting winter temperatures and higher flood elevations. Depending on the customer mission, GSA may need to provide buildings that maintain livable conditions in the event of extended power outages, interruptions in heating fuel, and shortages of water to ensure resilience and survivability.

Federal Acquisition Service

FAS's mission is to make federal agencies more effective at what they do by providing expertise, management, and optimal acquisition solutions. FAS is a key stakeholder in providing innovative acquisition solutions to federal agencies, including products and services to support the implementation of agency climate change adaptation plans. FAS operates on a fee-for-service model and recovers all of its operating costs through fees assessed on the goods and services provided to customers, so alignment with federal needs is critical in supporting its customers and sustaining the organization in the future. This poses risks (the inability to meet customer demand) and opportunities (the ability to prepare hand in hand with federal customers). For example, the proportion of the U.S. Forest Service budget allocated to firefighting has increased from 15 percent to nearly 50 percent. FAS will need to monitor increasing demand for supplies and services that assist agencies in managing their climate risks. This will ensure FAS has the ability to scale up and provide the appropriate type and amount of climate risk management offerings.

GSA Global Supply

GSA Global Supply supports military base supply stores in Asia, Europe, the Middle East, and

the United States. In these stores, GSA manages the inventory for the customer, while base personnel oversee daily store operations. More information on climate impacts faced by international sites is discussed later in this section.

GSA Fleet

GSA Fleet leases vehicles to federal agencies located across the United States, as well as to agencies operating overseas. Vehicle assets are particularly vulnerable to extreme temperatures, extreme weather events, and flooding. Extreme heat can cause a number of operational problems, including overheating, changes in the stability of certain fuels (algae blooms in biodiesel), and increased incidents of tire failures, such as blowouts. Extreme heat and precipitation changes can also damage crops used in the formulation of biofuels like ethanol and virgin oil biodiesel, leading to an increase in fuel costs for the federal fleet. Hybrid and dedicated electric vehicles (HEVs and EVs) can suffer from poor performance in cold or hot environments. HEVs may suffer from reduced fuel efficiency, and EV battery life is shortened in extreme cold and heat, leading to reduced vehicle range. Vehicle damage and loss could also increase due to changes in the intensity, timing, and location of extreme events, such as hail and flooding. However, GSA Fleet has the opportunity to reduce these risks by coordinating closely with its customer agencies to ensure proper geographical placement of vehicles and operation and maintenance procedures.

Operations

Since it operates on a fee-for-service model and is not a mandatory source in a majority of the markets it serves, FAS must work closely with customer agencies and industry partners to ensure the appropriate products and services are available to sustain mission-critical federal operations. The Office of Customer Accounts and Research—which enables FAS's understanding of customer requirements for the range of acquisition solutions and becoming a strategic partner in helping customers select the best value solution for their needs—will be a critical source of this information. Working closely with customers provides insight to the prospective adaptation needs of the customer agencies and enables FAS to ensure these needs are met through its offerings.

Economic Activities and Federal Supply Chain

As a source of federal supply for products and services, FAS is a key component of the federal product and service supply chain and depends on the larger global supply chain. Generally, FAS is vulnerable to fluctuations in demand that exceed our contractors' ability to deliver in a timely manner, as well as supply chain disruptions in manufacturing, transportation, or other capacities. Climate change could substantially increase these vulnerabilities, posing risks to the FAS mission, with cascading impacts to customer agencies. For example, flooding in Thailand in fall 2011 cost a Western Digital plant that produced one-fourth of the hard-disk disk sliders distributed worldwide nearly $200 million. As a result, consumers experienced elevated pricing by at least 10 percent due to supply deficits, Western Digital's recoup of losses and risk mitigation, and industry consolidations. Other potential risks include heat waves, drought, intense storms, sea level rise, and high fluctuations in temperature and precipitation.

3.2. Coordination with Continuity of Operations

GSA, along with all federal agencies, is required to conduct business analysis for the Federal Continuity Directive-2 of Department of Homeland Security (DHS). This document provides the Mission Essential Functions for continuity of government due to incidents. Extreme weather incidents are one type of impact to these mission essential functions, which include Logistics Management and Resource Support Emergency Support Function (ESF) #7 – Logistics Management and Resource Support Annex.[4]

GSA's Office of Mission Assurance (OMA) serves as the agency-wide lead for continuity of operations and special security programs, as well as disaster policy, planning, support, and operational coordination. In this role, OMA integrates the full suite of agency authorities, capabilities and equities to enact and guide the development of structured programs ensuring the resiliency of GSA's mission essential functions. GSA supports federal agencies and state, tribal, and local governments that need resource support prior to, during, and/or after incidents requiring a coordinated federal response. ESF #7 operates under the following authorities:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93- 288) as amended
- Homeland Security Act of 2002
- Homeland Security Presidential Directive 5
- Homeland Security Presidential Directive 8
- Post-Katrina Emergency Management Reform Act of 2006

As such, OMA is responsible for handling any extreme weather events, such as tornadoes or climate-related risks deemed so significant that it impairs GSA's statutory mission or operation. However, GSA's key logistics and resource role in support of ESF#7 could be challenged by an increase in the frequency and severity of extreme weather events, if supply chains are disturbed. Examples of such risks include increased frequency or intensity of storms (such as hurricanes), increased storm surge, inland or shoreline inundation, sea level rise, or increased incidence and spread of wildfires.

3.3. GSA Actions to Manage Climate Risks

In FY12 and FY13, GSA committed resources to addressing climate change in accordance with EO 13514, primarily through information dissemination and action training through workshops. A discussion of these activities, below, is followed by proposed plans to continue and build on these activities in FY14 and FY15.

[4] Available online at: http://www.fema.gov/pdf/emergency/nrf/nrf-esf-07.pdf

Ongoing Activities

Effective integration of climate risk management measures in operational planning and service delivery is dependent on a solid awareness of constraints and incentives. Even when climate risk management is helped by new information and technological solutions, the positive effects can sometimes be limited by lack of speed or institutional capacity to effectively mainstream adaptation. The development of an enabling environment for change, both at the level of individual decisions and at the organizational level, can act as a big incentive for adaptation. For example, GSA has collaborated with other agencies on long-term climate change scenario planning exercises, which have worked to improve understanding of climate change impacts on operations and will be used in adaptation planning. GSA focused efforts to make an enabling environment for change with its partners who are more directly engaged with State, Local and Tribes than GSA.

Efforts to Support and Encourage Adaptation: Building a Climate Resilient National Capital Region Workshop Series

Rationale
Starting in fall 2013, NCPC (National Capital Planning Commission), GSA, NASA (National Aeronautic and Space Administration), MWCOG (Metropolitan Washington Council of Governments), U.S. Global Change Research Program (USGCRP), and the Smithsonian Institution sponsored free invitation-only webinars and workshops to assist federal and local agency's climate adaptation planning and improve regional coordination. The workshops provide federal, regional, and local organizations with an opportunity to work together, share technical information, and collaborate on climate adaptation strategies tailored to the National Capital Region. Stewardship of the region's resources requires coordinating policy, tools, information, and expertise with others. Many federal, regional, and local agencies are individually exploring climate adaptation strategies for their buildings, infrastructure, workforce, and landscapes. However, no single entity can address all of its climate change risks without working with other area organizations.

Actions to Ensure Success
The workshop structure was based on a process for assessing and planning for vulnerabilities to climate impacts. This process has been tested and followed for several years by NASA managers.

In the interim between workshop events, participants were encouraged to complete 'homework assignments' to identify the built systems most vulnerable to climate change. In discussion groups, participants shared and synthesized the results of this homework, characterizing the primary threats common among participating organizations. At some of the workshops, participants broke into sector-based groups to identify strategies for a climate resilient DC area. The groups at the December workshop were:

- Transportation,

- Water/wastewater/stormwater,
- Governance,
- Geographically and historically significant areas,
- IT/telecomm, and
- Energy (electrical supply)

Workshop participants also honed elevator speeches and headlines to communicate climate preparedness messages within their organizations.

Timeframe: The workshop series began in 2013 and is continuing through 2014.

Efforts to Encourage Adaptation: GSA Regional Climate Scenario Sessions

Rationale
Superstorm Sandy, persistent drought conditions covering more than half of the United States, extended heat waves, and projections for more of the same through the end of the century. Climate change will impact organizations around the globe, and those that prepare today will be ready to swiftly navigate the challenges ahead. GSA recognizes the need to prepare today so it can maintain its mission and support its customers well into the future.

Actions to Ensure Success
GSA's PBS and FAS teamed with several federal partners in January 2013 to conduct climate scenario sessions that build capacity, capability, and confidence within the federal government to address incremental climate risks. The sessions were held in two regions: the National Capital Region (Region 11) and the Heartland Region (Region 6).

The sessions were designed to help the participants meet the requirements of Section 8(i) of EO 13514, which requires federal agencies to evaluate climate change risks and vulnerabilities and to manage the effects of climate change on agency operations in the short and long term. Climate change adaptation is an emergent problem set that requires PBS and FAS to develop innovative integrated service offerings that are tailored to support mission continuity for each federal customer.

The two scenario sessions brought together a set of federal stakeholders to sift through information on mission critical assets and climate projections and create strategies to address climate risks. Participants in each region focused on one customer and evaluated a select set of climate risks to two of the customer's mission critical assets: a facility and the information technology and telecommunication services that support the facility. GSA regional staff selected a willing customer with a need for better understanding climate risks to their assets. Region 6 identified its U.S. Department of Agriculture (USDA) customer, who is concerned about the future reliability of a mission critical data center and its information technology (IT) support given extreme heat and persistent drought conditions that are projected for Kansas City, Missouri,

through the end of the century. Region 11 staff wanted to leverage lessons learned from a major flooding event in 2006 at Internal Revenue Service (IRS) headquarters to assess how projected extreme heat and rising sea levels will impact the facility and the telecommunications services that support it.

The sessions leveraged the combined capabilities of PBS, FAS, and the participating agencies. Several science agencies, including NASA, NOAA (National Oceanic and Atmospheric Administration), and USGCRP, participated and provided climate projection information. The outcomes from both threshing sessions included a list of climate risks to the assets, strategies to address the risks, and the identification of partners and funding needed to effectively mitigate the risks, all of which will assist GSA and its customers in meeting their EO 13514 climate change adaptation goals. GSA worked together with EPA, IRS, NCPC, USGCRP, NOAA, and NASA to support the National Capital Region Climate Risks Preparation and Adaptation Pilot. GSA focused on the IRS headquarters building located in Washington, DC. The IRS identified this building as both mission-critical and vulnerable to the impacts of climate change. In January 2013, an all-day scenario session brought participants together to consider the impacts of long-term extreme temperature, sea level rise, and extreme precipitation projections. NASA supplied downscaled climate data, IRS brought experience from a flooding event at their facility in 2006, and NCPC provided expertise in comprehensive planning. The scenario tackled impacts to specific systems, facility and supply chain assets, and considered how to identify partners and funding needs.

GSA was awarded a GreenGov Presidential Award in the 'Climate Champion' category for these efforts. Recipients are recognized for exemplifying President Obama's charge to lead by example and demonstrating extraordinary achievement in the pursuit of EO 13514. Additionally, the Washington, DC, climate scenario session was recognized by CEQ's GreenGov Spotlight Community. CEQ selected six projects from across the Nation that exemplified the ability to leverage regional resources and help achieve the goals of EO 13514, *Federal Leadership in Environmental, Energy and Economic Performance*. A Spotlight Community demonstrates the benefit of a federal entity working with its neighbors, including local governments, area businesses, and non-profit organizations, to improve fleet management, increase renewable energy production and use, or enhance water conservation. The DC team is now moving forward with establishing priorities for creating a climate preparation and adaptation plan for the IRS building and the surrounding Federal Triangle area. The plan is expected to be adaptable to many federal building in the National Capital Region.

Timeframe: Sessions were held in 2012 and 2013. GSA is considering advancing existing efforts and expanding into additional regions if resources allow.

Necessary Resources: Dedicated representatives from the Washington, DC, and Kansas City, MO, sites to develop a site-specific adaptation plan and coordinate on activities. Additional GSA staff will be needed to expand efforts into additional regions.

For more information on the agency's FY12-13 activities, please refer to GSA's FY13 plan.

FY14-15 Climate Risk Management Actions

In FY14 and FY15, GSA will focus on four action items that continue to build better understanding and address the risks and opportunities brought on by climate change.

1. Update the agency Climate Change Risk Management Plan, per the requirements of Executive Order 13653, Preparing the United States for the Impacts of Climate Change.
2. Initiate update to agency and service-level vulnerability assessments based on the Third National Climate Assessment. This will lead to a subsequent update of the agency Climate Change Risk Management Plan in FY15.
3. Evaluate responses to the Request for Information to assess the marketplace for climate change adaptation services.
4. Deliver climate change adaptation training to GSA organizations by request.

FY14-15 Climate Risk Management Actions in Detail

Action #1	Update the agency Climate Change Risk Management Plan, per the requirements of Executive Order 13653, Preparing the United States for the Impacts of Climate Change
Action Goal	Update the agency Climate Change Risk Management Plan and associated documents (e.g., GSA Climate Change Adaptation Policy Statement) to address the new requirements of EO 13653.
Climate Risk(s) Addressed by Action	All climate risks (sea level rise, extremes of temperature and precipitation, and increasing frequency and magnitude of intense storms)
Responsible Organization(s)	GSA's Climate Adaptation Team and relevant partners in FAS, OGP, and PBS
Agency Lead	Office of Federal High Performance Green Buildings
New, Continuing, On-going, or Future Effort	Continuing
Potential Opportunities	This plan will help to build awareness of climate risks and strategic implications for GSA business lines. Updating GSA's Climate Change Risk Management Plan can lead to a number of potential opportunities, including: • Set the framework for identifying, evaluating, and addressing climate risks within GSA and in partnership with our customers. • Document prior actions, successes, and challenges, as well as

	define and make the agency accountable for future planned actions. • Build a better understanding among GSA staff regarding how climate change can impact the agency's ability to deliver its mission and how they can begin to prepare to manage these risks today. • Define barriers that the agency and others must address to ensure GSA is effectively preparing for climate change. • Ensure GSA's plans are coordinated with the most up-to-date National Climate Assessment projections.
Scale	National
Timeframe	FY14 – FY15; plan will be then be updated within one year of each National Climate Assessment release.
Implementation Methods & Key Milestones	This activity utilizes the methods and requirements of the GSA business processes overlaid with climate impacts. Implementation methods include non-routine strategic process assessments for resilient investment and mission impacts and maturity, requiring extensive advisement, coordination, and collaboration with partners across the agency. Based on these agency processes, some of which have evolved drastically in the last three years and are no longer routine to staff, the following are key past and future milestones: • FY11: Developed first agency wide adaptation action plan and was included in Agency Directives. • FY12: Implemented planned actions, which were used to inform the second-agency wide adaptation action plan. • FY13: Implemented planned actions, which were used to inform the third agency-wide adaptation action plan. • FY14: Implementing planned actions, which are used to inform the fourth-agency wide adaptation action plan with new criteria. • FY15-16: Implement planned actions including updated vulnerability assessment and used to inform fifth agency wide adaptation action plan.
Performance	GSA will track performance through its Self-Assessment. All actions beyond the self-assessment are dependent on agency stakeholder participation, continuity and agency issuance process.
Inter-governmental Coordination	GSA will coordinate with relevant customer and partner agencies to leverage and optimize adaptation activities and plans, such as coordination on technical studies and sharing outcomes to inform risk management efforts.
Resource Implications	To date, GSA has completed previous adaptation plans using in-house expertise with some contract support. Going forward, GSA is using more contract support to assist, given the high demand on agency staff

	to work on other non-technical endeavors such as collaboration efforts internally and with partner agencies to operationalize adaptation into existing processes. To plan and implement given the long-term challenges of climate change, the GSA climate team has found that non-routine problem solving skills and ex ante decision making are not typical components of GSA business processes, and thus agency staff have little experience with them. Staff must either be trained or hired in order to develop these skills within the agency.
Challenges/Further Considerations	This activity touches all GSA business processes, many of which have evolved drastically in the last three years and are no longer routine to staff. Due to these changes, it requires more time and resources to update GSA's Climate Change Risk Management Plan. Climate change adaptation planning efforts, which translate into future cost avoidance, seemingly align with GSA's actions over the past three year to reduce agency costs. However, the adaptation aspect of agency risk management is new and unfamiliar, the scope is extremely broad, and the return on investment is often uncertain and realized in the long term. This issue is relevant across the entire federal government.
Highlights of Accomplishments to Date	Since FY11, GSA has successfully implemented all planned actions spanning from agency-wide climate literacy, to the development of process-based metrics, and to advising projects on climate protection levels. More information on these accomplishments can be found in GSA's FY2013 Climate Change Adaptation Action Plan. Additionally, GSA has received several awards for one of its planned adaptation activities, the climate adaptation pilots it held with staff and customers in its Kansas City, MO, and Washington, DC, regions. These awards include: 2013 Presidential GreenGov Climate Champion Award; selection as one of six nationwide projects for CEQ's GreenGov Spotlight Communities program; and GSA's Real Property Innovation Special Achievement Award for Asset Management.

Action #2	Initiate update to agency and service-level vulnerability assessments based on the Third National Climate Assessment
Action Goal	Incorporate new science from the Third National Climate Assessment into GSA's agency and service-level vulnerability assessments. This will inform subsequent update of the agency FY15 Climate Change Risk Management Plan, and most importantly, inform GSA's prioritization of adaptation activities.
Climate Risk(s) Addressed by Action	All climate risks
Responsible Organization(s)	Climate team and relevant partners in FAS, OGP, and PBS
Agency Lead	Office of Federal High Performance Green Buildings
New, Continuing, On-going, or Future Effort	Continuing
Potential Opportunities	This activity will incorporate new science from the Third National Climate Assessment (NCA) regarding behavioral, social and economic impacts. The vulnerability assessments will include particular emphasis on the overlay of impacts to a) locations with concentrations of federal real property; b) mission-critical operations which cannot readily be relocated, such as data centers, Land Ports of Entry, etc.; c) the information technology/telecommunications sector; and d) emergency and disaster response products and services. GSA will provide specific vulnerability assessment content for Federal Triangle, Washington, DC; Kansas City, MO; and Boston, MA. Additionally, the agency will identify and include references to existing locality adaptation plans which dovetail with concentrations of GSA real estate. In addition, using information from the Third NCA, GSA will evaluate climate risks to data center and telecommunications supply chains to better inform its climate change adaptation planning and risk management activities. GSA will create short fact sheets for each of the eight NCA regions describing the climate vulnerabilities of data center and telecommunications equipment and services supply chains for each region. The information gathered will be shared with GSA acquisition staff and customer agencies and will serve as an opportunity to assist them in understanding climate risks and exploring ways to minimize the interruption of data center and telecommunications services. GSA also intends to share the outputs of this work with federal climate change adaptation, resilience, and preparedness working groups.

Scale	National
Timeframe	FY14 – FY15

Implementation Methods & Key Milestones	This activity will analyze the methods and requirements of GSA business processes overlaid with climate impacts. The following are key milestones:
	• FY11: Conducted first vulnerability assessment (VA) based on the 2009 NCA.
	• FY12-13: Used VA in Region 6 and Region 11 pilots as well as agency-wide climate literacy training sessions.
	• FY13-16: Ongoing advisement with relevant agency business lines to incorporate VA findings into projects, including:
	  ○ PBS Office of Design and Construction statement of work templates;
	  ○ Support for a Region 1 Land Port of Entry project;
	  ○ Regional Office and Central Office Project Reviews;
	  ○ PBS Portfolio Capital Investment and Leasing FY16 call, and
	  ○ Telecommunications and data center services.
	• FY16-17: Implement climate factors into relevant projects.

Performance	GSA will track performance through its Self-Assessment. All actions beyond the technical assessment are dependent on agency stakeholder participation, continuity and agency issuance process.
Inter-governmental Coordination	GSA will coordinate as relevant with customer agencies to optimize resources already deployed in technical studies and/or to share outcomes to inform their risk management efforts. GSA will also share any future climate assessment needs with the US Global Change Research Program for consideration in the next NCA.
Resource Implications	To date, GSA has completed previous vulnerability assessments using in-house expertise. Going forward, GSA is using contract support to assist these efforts, given the high demand on agency staff to work on other non-technical endeavors such as collaboration to operationalize.
Challenges/Further Considerations	Federal agency budgets have been reduced, but requirements for federal climate change adaptation planning activities have increased, posing a resource challenge to GSA. GSA recognizes that outsourcing the vulnerability assessment update process does not build agency capacity to execute this work. GSA also planned to use FRPP Mission criticality data element to assist in the effort to prioritize the results of the VA. However, this data element was removed in 2013 because the criteria were deemed subjective. All agencies need a way to communicate this factor, and GSA has conveyed this need to CEQ. GSA prefers use of a modified

	existing method, such as DHS's Federal Continuity Directive 2 (FCD-2), that focuses on gradual or chronic effects on mission and not incidents disrupting continuity. It is currently unknown whether agencies will receive sufficient funding to be able to manage the risks identified through the vulnerability assessments. This factor requires a greater judgment of methods to prioritize limited funding based on vulnerability, mission criticality, and the value of agency mission continuity or diminished capacity. It will be challenging for GSA to partner with its customers on managing climate risks identified if they are not appropriately funded to do so.
Highlights of Accomplishments to Date	All actions beyond the vulnerability assessment are dependent on stakeholder participation, continuity and agency policy issuance process. • FY11-Present: Used the Interagency Climate Change Adaptation Task Force's Guiding Principles to prioritize the most vulnerable assets relevant to the most critical. Planned to use the FRRP mission criticality data element. • FY13: Built capacity with agency staff and customers through more detailed use of the NCA for pilots in Region 6 and Region 11. • FY13: Assisted USGCRP with two-pager summaries for the NCA. • FY14: In partnership with PBS Portfolio, the Adaptation Team included in the FY16 Capital Investment and Leasing Plan call a Climate Risks section to guide project prioritization and assistance. • FY14: Under advisement with GSA's Office of Government-wide Policy, discussed options to report federal liabilities regarding GSA assets in flood plains and also anticipate an OMB data call for such information based on the President's Climate Action Plan. • FY14: Under advisement with GSA's new enterprise-wide Geographic Information Systems (GIS), discussed options to respond to customer inquiries regarding GSA assets in flood plains and anticipate more inquiries. Developing adaptation requirements in May 2014. • FY14: Under advisement with GSA's Fire, Safety and Environmental Program, discussed options regarding GSA assets in flood plains and anticipate more inquiries. • FY14: Under advisement with GSA's Operations and Maintenance Program, discussed options regarding recording the causes of building component failures based on climate impacts. Confirmed again that GSA only records such failures when a facility was in a FEMA disaster location. Currently under advisement and collaboration with other agencies that track real time temperature or wind loads effecting equipment or systems performance or failure. • FY14: Under advisement with GSA's Office of Mission Assurance

	to determine methodology based on existing methods from DHS-Federal Continuity Directive -2 (FCD-2) . Additionally sought assistance from CEQ.

Action #3	Define demand and supply for Climate Change Adaptation Support Services
Action Goal	Assess the marketplace for climate change adaptation services (Applying and Interpreting Climate Models, Applied Climate Science, Climate Risk Management, and Climate Risk Communications and Training) and determine any next steps GSA should take to support federal agencies in acquiring these services.
Climate Risk(s) Addressed by Action	This action will assist other agencies in identifying and addressing their climate risks, which will vary depending on the location of operations.
Responsible Organization(s)	FAS
Agency Lead	Office of Acquisition Management
New, Continuing, On-going, or Future Effort	Continuing
Potential Opportunities	GSA is dedicated to procuring goods and services for the federal government. As an integral part of GSA, the Federal Acquisition Service (FAS) possesses unrivaled capability to deliver comprehensive products and services across government at the best value possible. GSA is in the unique role to ensure climate change adaptation support services the federal agencies need to achieve their adaptation plan goals are available in a timely and cost-effective manner.
Scale	These services can provide support to a wide variety of federal agency functions, whether they are local, regional, national, or international in scale.
Timeframe	FY12 – FY17
Implementation Methods & Key Milestones	This activity uses the methods and requirements of the federal procurement process to assess the marketplace for an emerging industry. Based on this method, the following milestones were created: • FY12: Coordinated with the White House Council on Environmental Quality (CEQ) to discuss issuing a Request for Information (RFI) to assess the marketplace for climate change adaptation support

	services and received their thoughts, comments, and buy-in. • FY13: Hosted customer meeting to determine federal need for climate change adaptation support services. Developed and issued RFI. • FY14: Evaluated RFI responses and formulated final market assessment. • FY15: Develop options for next steps, including but not limited to revisions to the current Schedule 899 or other schedules, a different acquisition strategy, and a future solicitation. Present options and recommendations for next steps to FAS management for review and approval. • FY16-17: Implement selected and approved next steps.
Performance	Beyond the listed milestones above, GSA will create a performance tracking plan once the market assessment is completed and an implementation strategy is selected and approved by FAS management.
Inter-governmental Coordination	GSA has coordinated the entire RFI effort with federal climate science and procurement subject matter experts, including staff from the National Parks Service, National Oceanic and Atmospheric Administration, Army Corps of Engineers, US Global Change Research Program, NASA, and GSA.
Resource Implications	To date, GSA has completed the required steps by accessing the expertise that exists in the federal climate change adaptation and acquisition communities. GSA expects future milestones will also be completed using existing federal staff.
Challenges/Further Considerations	Since GSA's initial discussion with its customers in October 2012, federal agency budgets have been reduced, but requirements for federal climate change adaptation planning activities have increased. It is currently unknown whether agencies will receive sufficient funding to purchase needed climate adaptation support services. The marketplace for climate change adaptation support services is also growing at a rapid pace. GSA will need to consider this if it decides to issue a solicitation for these services, as the marketplace may significantly change between the time GSA completes its market assessment and when a solicitation is issued.
Highlights of Accomplishments to Date	FY13: In early FY13, GSA hosted a meeting with 10 customer agencies to discuss the types of climate change adaptation support services are needed by the federal community. Based on this discussion, GSA coordinated with federal climate science and procurement experts to develop and issue an RFI on September 26, 2013. FY14: The RFI closed for responses in December 2013. GSA reached out to the federal climate science community and successfully found a

	team of volunteers to assist in assessing the RFI responses. The team is providing GSA with substantial support in reviewing the responses received and providing subject matter expertise in the areas of climate science, risk management, and communications.

Action #4	Deliver climate change adaptation training to GSA organizations by request
Action Goal	Build climate risk literacy, capability, and confidence in specific business lines and agency processes
Climate Risk(s) Addressed by Action	All climate risks
Responsible Organization(s)	Climate team and relevant partners in FAS and PBS
Agency Lead	Office of Federal High Performance Green Buildings
New, Continuing, On-going, or Future Effort	Continuing
Potential Opportunities	GSA has the opportunity to expand and enhance the use of geographic information systems (GIS) throughout agency operations. This method can help GSA track assets and operations in order to understand and plan for potential impacts from climate risks.
Scale	National
Timeframe	FY14 – FY17
Implementation Methods & Key Milestones	This activity is utilizing methods and requirements of GSA business processes with consideration of climate risks and potential impacts. Adaptive management is the primary implementation method, using a flexible yet structured and systematic process for continually improving decisions, management policies, and practices by learning from the outcomes of decisions previously taken. Based on existing processes, the following are key milestones : • FY11: Conducted first vulnerability assessment based on 2009 NCA. • FY12- 13: Conducted pilots in Region 6 and Region 11 as well as agency-wide climate literacy training sessions, briefings to senior leadership, and regional leadership and account management community.

	• FY13-16: Ongoing advisement with relevant agency business lines to incorporate findings into projects, such as multiple statement of work templates for the PBS Office of Design and Construction, support for a Region 1 Land Port of Entry project, Regional and Central Office Project Reviews, PBS Portfolio Capital Investment and Leasing FY16 call, and the SSA-focused Client Portfolio Planning team. • FY16-17: Implement climate factors into relevant projects.
Performance	All actions beyond the technical assessment are dependent on agency stakeholder participation, continuity, and agency issuance process. Effectiveness of GSA trainings can be measured based on future planning actions of trainees. For example, GSA work may be deemed successful if future projects incorporate climate risk management into the planning and management phases.
Inter-governmental Coordination	Coordinate as relevant with customer agencies to optimize resources already deployed in technical studies or to share outcomes to inform their climate risk management efforts.
Resource Implications	To date, GSA has completed training and technical support using in-house expertise. Going forward GSA is seeking to add staff given the demand on existing CCA agency staff directed to other non-technical endeavors.
Challenges/Further Considerations	Topics ranging from historic properties to maladaptation in vulnerable communities will require developing criteria, guidance, and implementation methods in issues largely unfamiliar to the agency. Preparing agency staff to have the confidence and capacity to successfully implement this emergent aspect of risk management requires ongoing effort and resources. GSA and other federal agency staff struggle to understand how climate change presents risks to their supply chains. This is a challenge not only for adaptation staff, but also for agency leadership and management. While GSA strives to build awareness of climate risks in the supply chain through its training and pilot activities, staff still struggle to understand the risks and what they can, or should, do to manage the risks. Since federal agency budgets have been reduced, but requirements for federal climate change adaptation planning activities have increased, it is currently unknown whether agencies will receive sufficient funding to be able to manage risks identified in vulnerability assessments. This factor requires improved judgment in prioritizing the use of limited funding based on vulnerability, mission criticality, and the value of the agency mission continuity or diminished capacity.

Highlights of Accomplishments to Date	All actions beyond the technical assessment are dependent on stakeholder participation, continuity, and agency issuance process. • FY13: Built capacity through more detailed use of NCA for pilots in Region 6 and Region 11. GSA received several awards for the climate adaptation pilots it held with staff and customers. These awards include: 2013 Presidential GreenGov Climate Champion Award; selection as one of six nationwide projects for CEQ's GreenGov Spotlight Communities program; and GSA's Real Property Innovation Special Achievement Award for Asset Management. • Assisted USGCRP with two-pager summaries for NCA. • FY13: Data element removed from FRPP because of the subjective nature of content. • FY14: Developed a Capital Investment and Leasing Plan call section for Climate Risks. Under advisement with PBS Portfolio to broadcast to regions and support teams in prospectus development. • FY14: Under advisement with GSA's Office of Government-wide Policy, discussed options to report federal liabilities regarding GSA assets in flood plains and anticipate OMB data call for such information based on the President's Climate Action Plan. • FY14: Under advisement with GSA's new enterprise-wide GIS, discussed options to respond to customer inquiries regarding GSA assets in flood plains and anticipate more inquiries. Developing adaptation requirements in May 2014. • FY14: Under advisement with GSA's Fire, Safety, and Environmental Program, discussed options regarding GSA assets in flood plains and anticipate more inquiries. • FY14: Under advisement with GSA's Operations and Maintenance Program, discussed options regarding recording building component failure causality based on climate impacts. Confirmed again that GSA only records such failures when a facility is in a disaster location. This work is under advisement and collaboration with other agencies that track real time temperature or wind loads effecting equipment or systems performance or failure. • FY14: Under advisement with GSA's Office of Mission Assurance to determine methodology based on existing methods from DHS-Federal Continuity Directive -2 (FCD-2) . Sought assistance from CEQ. • FY14: Coordinated with USGCRP and the US Army Corps of Engineers in the creation of two adaptation planning resources available on GSA's Sustainable Facilities Tool (SFTool). This includes the following SFTool modules: ○ Hot Annotated EO 13653, which contain links to federal external resources that help agencies better understand and implement EO 13653, definitions of new terminology, and strategies and best practices on how federal agencies

	are taking steps to prepare for climate change. ○ Climate Change Risk Preparation and Adaptation Planning module, which provides detailed steps and tips to assist federal agencies in hosting climate risk workshops similar to the ones GSA held with its staff in Kansas City, MO, and Washington, DC.

3.4. Climate Risk Management within Supply Chains, Property Investments, and Capital Equipment Purchases

Supply Chains and Suppliers

GSA establishes long-term government-wide contracts, called Schedules, with commercial companies to provide federal agencies access to millions of commercial products and services at volume discount pricing. The Schedules represent a portion of the federal supply chain, and more than 18,000 commercial companies hold a GSA Schedule. With such a large scope, GSA will prioritize climate risks in its supply chain by first targeting the products and services that federal agencies identify as mission critical.

As a first step, GSA has identified telecommunications and data center services as both mission-critical to its customers and vulnerable to climate change risks. This determination is based on climate scenario sessions GSA held in 2013, additional discussions with its customers, and published reports. The results of the Business Continuity Institute's November 2013 Supply Chain Resilience Survey, which covered 519 respondents from 71 countries, noted "the primary sources of disruption were unplanned IT or telecom outages, with 55% stating they experienced high or some impact from this type of disruption." These outages were ranked as the top cause of supply chain disruption for the financial and insurance services, professional services, public administration and defense, and information technology and communication services sectors. In addition, recent extreme weather events have caused significant costs to the telecommunications sector. For example, Superstorm Sandy in 2012 cost Verizon $1 billion and was the single largest impact to its wire line infrastructure in its 100-year history. [5] While GSA does not yet have the information to calculate the costs and benefits of such risks, the agency expects the costs suppliers incur to recover from events like these and future climate-related events will be passed along to its customers, so any proactive steps that can be taken today can help in managing the rise of future costs.

To mitigate these risks and potential increased costs, GSA will collect, review, and summarize published information on climate risks to data center and telecommunications supply chains to better inform its climate change adaptation planning and risk management activities. Based on the findings of this study and the results of the most recent finalized National Climate

[5] Source: http://www.pbs.org/newshour/bb/science-july-dec13-sandy_10-28/

Assessment (NCA), GSA will create short fact sheets for each of the eight NCA regions describing the data center and telecommunications equipment and services supply chains climate vulnerabilities for each region. The information gathered will be shared with GSA acquisition staff and customer agencies to assist them in understanding climate risks and exploring ways to utilize the procurement process to minimize the interruption of data center and telecommunications services. GSA also intends to share the outputs of this work with federal climate change adaptation, resilience, and preparedness working groups.

Real Property

PBS seeks to provide robust, climate-ready workplaces for its federal customer agencies and to secure the federal real property investment. It does this by first addressing existing assets in GSA's real property portfolio (owned and leased). These assets are the federal investment to be secured—real property and the customer's mission executed from a mission-critical, climate-vulnerable site. Going forward, as new capital becomes available or significant reimbursable work is received from customers that need new mission-critical sites, GSA will conduct technical and feasibility studies, including climate risk factors in the pre-project formulation phase. In addition, climate risk factors should also inform decisions of any forthcoming civilian property space consolidation actions.

Currently, PBS's adaptive capacity is determined by its ability to organizationally factor climate readiness into its management and business processes, on the basis of its understanding of climate projections and existing site-specific climate impacts. This capacity contributes to GSA's interagency effort to plan for climate change adaptation because climate-ready real property will be essential to ensure continuous support of all customer missions, however they may evolve to adapt to climate changes. Mission delivery is affected by federal policy, variable funding levels, increasing temperatures, changing precipitation patterns, devastating storms, and rising sea levels. In ensuring customer resiliency to climate change and other challenges, PBS will draw on analysis of many sectors and scales of infrastructure connected to real property, including transit/transportation, utilities (power, gas, electric, water, and wastewater), telecommunications, business and commerce to support operations, food, and material supply.

PBS will partner with customer agencies to determine Climate Protection Levels (CPLs) at the specific site and facility scale for mission-critical sites. CPLs are climate-based, expert-determined benchmarks achieved through the implementation of design and performance standards with the express purpose of limiting the climate change risk exposure. PBS will adopt CPLs to address factors such as higher summer design temperatures (and the associated need to minimize cooling loads), lower and longer-lasting winter design temperatures, and higher flood elevations. Building operating plans, alternative workplaces, and mobility strategies must follow through to support the CPLs. In addition, contingency plans for funding resources must address building enclosure maintenance, including requirements to retune, calibrate, or repair complex building control systems.

Depending on the customer mission, GSA may need to provide buildings that maintain livable conditions in the event of extended power outages, interruptions in heating fuel, and shortages of water to ensure resilience and survivability. Widespread adoption of CPLs may require GSA to further interface with pertinent code-making bodies to develop new standards, codes, and regulations to better equip sites and facilities to adapt to extreme climate conditions, comply with rigorous storm standards (such as those required by the Miami Dade County hurricane code), and incorporate resiliency as a life-safety issue. For mission-dependent sites where the mission will be impeded but not fail or currently non-vulnerable sites, PBS will build climate factor monitoring into existing asset management methods, such as building evaluation reports and physical condition surveys, at the specific site and facility scale.

Capital Equipment

GSA has reached out to and researched the insurance, accounting, and actuary communities connected to real estate and supply chains. Across the board, these organizations—from the United Nations Environmental Program Financial Initiatives Global Roundtable to entities in U.S. corporate real estate and those working on building codes and standards—are carefully considering the upward trending costs and frequency of extreme events. Interestingly, the costs of incremental climate change and variability (e.g. persistent drought, insect infestation, human health impacts, etc.) are not readily available, perhaps due to the short time frames the investment community addresses and the adoption gap of a robust methodology for the valuation of externalities.

This is a challenge for GSA because the development of accounting standards and insurance or valuation methods are not a part of GSA's core mission. GSA, and the federal government as a whole, needs information on how to monetize costs avoided (not cost savings) by investing up-front in risk management to avoid the large costs of a risk's negative effect. For example, because the federal government is not insured, setting a value on the avoided costs of ensuring mission continuity and securing federal investments in a changing climate is difficult. Gathering such information is critical to measure the long-term benefits of mainstreaming climate change adaptation to GSA and the nation by reducing risk to life and property, enhancing economic vitality, promoting environmental and infrastructure sustainability, and reducing vulnerability to dynamic processes. GSA has informed CEQ and the U.S. Government Accountability Office (GAO) that an open-source risk model and approach to monetizing the cost and payoff of risk management is needed.

4. Modernizing Federal Programs to Support Climate Resilient Investment

4.1. Overcoming Barriers to Adaptation

Internal Preventable Barriers

GSA recognizes that current and future impacts of a changing climate present one of the most serious barriers to the federal government's ability to effectively carry out its mission. The main internal barriers to adaptation within GSA include: limited understanding of climate risks and how to prepare for them, perceived lack of immediacy and relevance about climate risks, unclear scope and responsibilities, lack of integration across institutional stovepipes, slow process change, and limited budgets and budget processes.

1. **Limited understanding of climate risks**

Rationale

This barrier is characterized by both lack of understanding about climate risks, and a lack of information and guidance on how to manage these risks.

Momentum is lacking to make climate risk management a priority, both in terms of leadership at GSA and in our customer agencies. While there is increased engagement from the White House with agency leadership in this area, many agencies are struggling to understand the value or urgency of directing already limited resources towards identifying and addressing climate risks. Until customers request support to address climate risks associated with GSA-supplied facilities, products, or services, GSA is not able to prioritize these efforts within its business model.

Credible, readily available, and practical information about climate risks is critical for effective climate risk management decision-making. The scientific effort that underpins this information is complex, and people often lack the tools and capacity to transform knowledge of direct climate impacts into decisions and actions. There is a strong demand for guidance that translates the science of climate change into information that is useful for decision-making (e.g. for evaluating the cost, benefit, and most effective timing of adaptation options).

Actions to Reduce Vulnerability

While GSA will continue to engage and coordinate with the staff-level climate change adaptation community to identify opportunities and manage climate risks, GSA needs continued support from the White House to make climate risk management a priority within the federal community in order to incorporate climate risk factors into our existing processes. GSA also needs agency leadership to communicate the importance of climate adaptation planning and provide visibility on this topic to develop a culture of prevention and

preparedness.

Timeframe

Short term – 18 months: To counteract the lack of understanding about climate risks, agency staff needs to hear from senior leadership that climate risk management is a priority in the short term. It is an emergent and complex topic that is understood over time, and the agency must begin to build capacity today. GSA needs to carefully develop an internal consultancy to support business lines. To counteract the dearth of practical information and guidance, GSA should continue engagement with science agencies to build internal consultancy.

Long term – 5 years: GSA should work toward building a robust internal consultancy on a cooperative extension model[6]. This would foster a network of staff educated in climate risk management principles and methods, who can share information and best practices with others.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- GSA's internal consultancy should consist of dedicated staff to cultivate risk management skills, and to establish methodologies and standard operating procedures relevant to agency business processes. This resource requires a budget for regional travel to pilot locations. It should also be designated as a priority in interface with agency geographic information system (GIS) team.

2. Perceived lack of immediacy and relevance about climate risks

Rationale

This barrier is associated with both the timing and the relevance of climate risks. Agency staff assume that climate change will not begin to impact GSA for many decades, and therefore do not feel there is a need to develop strategies to address these risks today. It is also difficult for people across all organizations within GSA, and at all levels, to make the connection between their key business priorities (such as growth in sales, budgetary and time constraints, and cost savings), and the long-term need to prepare the business to adapt to the effects of climate change.

[6] A cooperative extension model is based on the Cooperative Extension System, a non-formal program implemented originally by the US Department of Agriculture and designed to help people use research-based knowledge. As a resource to overcome barriers to adaptation, a cooperative extension model could serve to translate scientific research into actionable information for decision-making, as well as to inform the research community about gaps in existing knowledge.

Long-term vs. short-term priorities: Long-term problems involving varying levels of uncertainty, non-routine problem solving skills and ex-ante decision making are not typical components of GSA business processes. GSA staff has little experience dealing with these types of issues. Additionally, agency leadership tends to be focused on making big wins during the timeframe of their appointment, and climate risks are generally more long-term in nature. GSA's business model is geared towards addressing the needs of its customers today. Without demand today from its customer agencies to address climate risks in its offerings, such as facilities, products, or services, GSA will struggle to incorporate climate risk factors into its existing processes.

Compliance vs. proactive planning: There is a broad perception by agency staff that climate adaptation is a compliance process with a definitive endpoint, rather than an iterative risk management process that evolves over time.

Actions to Reduce Vulnerability

GSA already collects information regarding damage and mission impacts after a disaster is declared. GSA and other agencies should develop methods to identify and document causality between incremental climatic change and business disruption/downtime to make the issue of climate risk management more real and relevant. This is particularly useful if it can be demonstrated that proactive planning is more effective and less costly than reacting after the fact.

Timeframe

Short term – 18 months: Continue engagement through pilots to build internal consultancy.
Long term – 5 years: GSA should work toward building a robust internal consultancy on a cooperative extension model. This would foster a network of staff educated in climate risk management principles and methods, who can share information and best practices with others.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- Risk management process training for applicable agency staff focused on incremental climate impacts.

3. Scope and responsibilities are unclear

Rationale

The extent to which responsibility for adaptation lies within existing obligations in other areas is unclear. Because adaptation is, at its simplest level, an effort to prepare for and respond to a changing climate, it is similar to other actions that governments take every day to

manage the risks presented by external stressors and shocks. It is difficult, for example, to draw a definitive boundary between emergency response/recovery and adaptation planning. Similarly, there are overlaps between climate risk management and provisions of national security, and intersections between asset maintenance programs and adaptation. Ideally, some degree of planning for climate risks can be 'mainstreamed' into other forward planning exercises, like emergency response or Continuation of Operations (COOP) Plans, however this integration needs to be deliberate and intentional.

Actions to Reduce Vulnerability

GSA should continue to coordinate with the Office of Mission Assurance to avoid duplication, optimize resources, and address the fact that acute and chronic climate impacts require different skill sets. GSA needs staff with climate, technical, economic, and/or risk management skills to help the agency effectively prepare for climate risks.

GSA can continue to advance existing adaptation pilots, and expand them to additional GSA regional offices to build an internal consultancy. The pilots help to build adaptation capacity by immersing FAS and PBS staff in one-day climate scenario sessions that walk participants through a potential future climate change scenario, identifying and evaluating the risks associated with the scenario, and developing strategies to reduce the identified climate risks. Staff in GSA's Kansas City, MO, and Washington, DC, offices have participated in these sessions, and GSA can expand to other vulnerable locations, like Boston, MA. Over time, these pilots will help to build the necessary climate risk management skill sets with applicable staff. However, additional external training may be necessary to ensure staff have the appropriate breadth, depth, and mix of climate, economics, and risk management skills.

Timeframe

Short term – 18 months: Continue engagement through pilots to build internal consultancy.
Long term – 5-10 years: Build a robust internal consultancy by utilizing a cooperative extension model, resulting in a network of staff educated in climate risk management principles and methods, who can share information and best practices with others.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- In the absence of such training provided internally by the federal government, agencies will need adequately funded budgets to purchase external climate, economics, and risk management training resources.

4. Confusion about mitigation and adaptation

Rationale

Coordination between adaptation and sustainability/mitigation staff must be carefully navigated, particularly when assigning climate risk duties to sustainability/mitigation specialists. Adaptation is a related but different problem set that requires understanding and application of very different skills. Most GSA staff are not familiar with and do not have experience applying the skill sets necessary for climate risk management work, and the skill sets of the sustainability/mitigation team members are not easily transferred to climate risk management work. GSA requires a team with climate, economics, and risk management skills to ensure that the agency is able to effectively adapt to climate change.

Actions to Reduce Vulnerability

By continuing and expanding adaptation pilots for regional offices, GSA can build the internal consultancy resource necessary to support climate risk management within the agency.

Timeframe

Short term – 18 months: Continue engagement through pilots to build internal consultancy.
Long term – 5-10 years: Build a robust internal consultancy by utilizing a cooperative extension model, resulting in a network of staff educated in climate risk management principles and methods, who can share information and best practices with others.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- In the absence of such training provided internally by the federal government, agencies will need adequately funded budgets to purchase external climate, economics, and risk management training resources.

5. Lack of integration across institutional stovepipes

Rationale

Institutional ‘stovepipes’ are organizational divisions working separately from each other, following different policy objectives and sometimes working towards different time horizons. Such divisions can be the result of historical working relationships (‘it’s always been this way’) and institutional cultures (‘they don’t work the way we do’). However, the risks that climate change presents are often complex, and require an integrated approach if they are to be managed successfully. An uncertain and challenging budgetary landscape also impedes the climate risk management progress.

GSA has consolidated many operations to reduce redundancy and streamline operations. We have developed some consolidated offerings, such as Total Workplace, yet this is a new way of working, and is not sufficiently common to be second nature. The required change in

way of thinking, the combination of business models and practices, and the extra resources necessary for these changes to take place are the essence of this barrier.

Actions to Reduce Vulnerability

Stovepipes can be addressed through improved communication and coordinating networks on specific cross-cutting issues, like adaptation. In order to be successful, these networks must set out broad aims and objectives about working together to achieve common goals. They should also encompass an implementation framework for how objectives will be achieved, with agreement on joint actions, budgets, and timescales.

Timeframe: 5-10 years

Necessary Resources

- Requires significant support from GSA senior management, especially the FAS and PBS Commissioners.
- Small core team from FAS and PBS to help develop communications and training across organizational divisions.

6. Process change and business line funding boundaries

Rationale

Developing new (or modifying existing) guidance or processes regarding human resources, budget development, internal controls and governance to effectively manage any new challenge simply does not elicit a prompt response from GSA or any agency. The inertia associated with most agency processes slows concurrence through the agency, and hinders conveyance through agency policy issuance processes, including legal review. In addition, projects and programs that require funding across GSA's business lines (OGP/PBS/FAS), such as climate risk management, are difficult to coordinate and manage due to the different funding methods for each organization.

Actions to Reduce Vulnerability

Clear performance indicators that describe how to measure, communicate, and benchmark progress on adaptation would encourage action.

Timeframe: 5-10 years: Build a robust internal consultancy by utilizing a cooperative extension model. This would foster a network of staff educated in climate risk management principles and methods, who can share information and best practices with others.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency

leadership and staff in climate risk management issues.

- In the absence of such training provided internally by the federal government, agencies will need adequately funded budgets to purchase external climate, economics, and risk management training resources.

7. Limited budgets and budget process

Rationale

Adaptation actions and strategies can be perceived as expensive, and it is unclear who should pay for them. Sometimes the benefits of investing in adaptation are outside the scope and timeframe of investment and budget decisions.

Actions to Reduce Vulnerability

Efforts to understand the costs of inaction, and to make the economic case for different adaptation options, should be communicated widely to demonstrate the value of investing scarce resources at an early stage.

Timeframe: Unknown

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- In the absence of such training provided internally by the federal government, agencies will need adequately funded budgets to purchase external climate, economics, and risk management training resources.

8. Limited understanding of GIS

Rationale

Agency proficiency and strategic use of Geographic Information Systems (GIS) in the assessment and management of climate risks is limited.

Actions to Reduce Vulnerability

The Adaptation team is currently developing requirements with the GIS team to support adaptation.

Timeframe: 5-10 years

Necessary Resources: Expansion and use of enterprise-wide GIS.

The solution for many of the human resource-related issues outlined above is a concerted, determined process of education and change management. Significant time and effort will be necessary to expand the knowledge base needed to provide relevant knowledge and skills, and to manage change over a large organization. Climate risk assessment is new to most staff, and adding this complex new requirement to existing workloads will be a challenge. Many agencies, including GSA, will need to dedicate staff full time to leverage change and help other staff to include this scope in their work.

The number of people in GSA currently capable of providing the educational and training component is quite small, and this is not a topic that lends itself to simple "train the trainer" programs. We show this as a barrier principally because the time needed to accomplish the change is longer than this plan envisions. Many of these aspects of risk management are new and unfamiliar; the scope is extremely broad; and, our predictive ability is imprecise regarding resources. We are working on possible solutions, and these are described in Section 3.2 of this Plan.

Strategy Execution Barriers

GSA is engaged in managing acute and chronic climate risks for two primary strategic objectives - securing federal investments in real property and supply chains for products and services, and supporting the long-term mission continuity of our customers. This is GSA's value proposition. GSA has relied on scenario planning for strategic development to generate risk management options. Implementation has revealed strategy execution barriers which, in their current form, hinder and frustrate progress to incorporate climate and adaptation factors across GSA. These are among the processes which we will need to improve in order to achieve the goals of this Plan.

1. Lack of awareness and understanding of the imperative for adaptation

Rationale

Confusion persists between *adapting to* climate change (i.e., preparing for some degree of inevitable change), and *mitigating* (i.e., preventing future change). In contrast to emissions reductions, which are easily quantified, progress on adaptation is difficult to measure and report. There is also a lingering impression that adaptation implies a cavalier attitude towards emissions reductions and mitigation. In fact, the two responses are vital.

Actions to Reduce Vulnerability

There is a need for awareness-raising within GSA to demonstrate the importance of understanding and responding to climate change impacts.

Timeframe: 5-10 years

Necessary Resources: Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.

2. Customer barriers

Rationale

Customer agency leadership and staff face the same challenges as GSA, which makes demand planning and implementation more challenging. This is particularly true because GSA must make different adaptation plans and decisions depending upon the mission criticality of a facility, supply, or service as determined by the occupying or procuring agency. A concern is that there is no common methodology or understanding for agency officials to determine whether a facility, supply or service is 'mission critical' regarding interruptability, relocateability, and replaceability in the context of incremental climate impacts. This is an essential step in determining where to prioritize adaptation activities. If agencies over-state the number of facilities, supply or services that require the extra measure of adaptation planning, the sites, supply or services most at risk to climate change may not be addressed in a timely manner.

Actions to Reduce Vulnerability

The lack of a common methodology to determine climate change impacts on mission criticality has been identified and conveyed to CEQ, DHS, the Agency Adaptation Planning Working Group, and the Federal Adaptation Community of Practice.

Overcoming this barrier will require development of criteria, guidance and implementation methods in subject matter that is primarily unfamiliar to agency staff. Developing the capability, confidence and capacity of agency staff to successfully implement this emergent aspect of risk management requires ongoing resources of staff and training.

Timeframe: Unknown

Necessary Resources: Assistance from OMB and CEQ leadership in coordinating the development of a common methodology across the federal government to determine mission criticality in the context of climate change.

3. Changes in management methods

Rationale

Changing management methods for people, processes and resources can present barriers to agency-wide adoption of climate risk management strategies. For example, agency staff are still contending with new management methods introduced following the return to central control of guidance and functions (away from regional control), and this has created inconsistencies in the use and application of core agency transactions. For mission and

business continuity planning purposes, GSA would benefit from a concerted effort to develop skills for managing across large time and spatial scales, as well as an increased emphasis on proactive, preventative management (rather than reactive responses to address extreme incidents).

Actions to Reduce Vulnerability

GSA is adopting an adaptive management approach by engaging in incremental tasks to pilot, evaluate and learn from outcomes and make adjustments in the next implementation cycle. GSA also seeks to overcome organizational tendencies to rely on decision tools which assume predictability, including customer mission assumptions which may be affected by a changing climate.

GSA needs to incorporate consideration of climate change impacts on customer mission in demand planning. Our experience with this process is limited; to date, climate risk management within agency transactions is very preliminary, and we do not yet have a complete view of either the scope or the effort that will be required to effectively manage climate risks in demand planning.

Timeframe: 5-10 years: Build a robust internal consultancy by utilizing a cooperative extension model.

Necessary Resources

- Climate change translators who can effectively communicate with and train agency leadership and staff in climate risk management issues.
- In the absence of such training provided internally by the federal government, agencies will need adequately funded budgets to purchase external climate, economics, and risk management training resources.

Policy and Funding Barriers

Existing policy and funding programs, especially if they were developed before there was widespread acknowledgement and understanding of the importance of responding to climate change, can act as a barrier to adaptation. These policy and funding barriers can be considered *adaptation constraining* policies[7]:

[7] Willows, R.I. and Connell, R.K. (Eds.). (2003). Climate adaptation: Risk, uncertainty and decision-making. UKCIP Technical Report. UKCIP, Oxford.

> "Climate adaptation constraining decisions lead to actions that limit or constrain the ability of other decision-makers to manage, reduce or otherwise adapt to the consequences of climate change. Such outcomes are called climate mal-adaptations (IPCC, 2001). Climate adaptation constraining decisions may be implemented in order to achieve perfectly proper and well-intentioned objectives. However, they have negative consequences for others in terms of the future level of climate risk and its effective management. In order to avoid climate adaptation constraining decisions, decision-makers need to consider the impact that their decisions may have on the ability of their successors, or the ability of other decision-makers with other areas of responsibility, to adapt to future climate change. Hence, climate adaptation constraining decisions include the consequences of decisions taken today that restrict the freedom of future decision-makers to manage future climate risks."

Adaptation constraining policies and funding programs make it more challenging for individuals, systems, physical infrastructure, or natural environments to manage climate risks appropriately. They include policies and funding programs that increase vulnerability or reduce adaptive capacity to climate risks.

The following section presents examples of policy and funding barriers that limit or constrain options for adaptation.

1. **Policy or Funding Barrier:** Federal Acquisition Regulation (FAR)

   Rationale

   The FAR drives acquisition requirements and policies for the federal government and does not currently include requirements for agencies to address climate risks that could impact the delivery and availability of mission critical facilities, products and services. In the absence of such requirements, federal agencies leave themselves potentially at risk of not having access to the products and services they need to successfully execute their missions. This could include vulnerability to climate change-related disruptions in the supply chain, such as flooded manufacturing facilities that cause shipment delays and increased prices or lack of telecommunications services due to severe wind events.

   Actions to Address Vulnerability

   Through climate scenario planning sessions, GSA is assessing the vulnerabilities and risks associated with the procurement of telecommunications and information technology (IT) products and services. As federal agencies depend more and more on computers, data centers, telework technologies, and the infrastructure that support these items (e.g., electricity grid and adequate cooling systems) to execute their missions, it becomes increasingly important to identify and mitigate climate risks that could disrupt the supply chains for these products and services. Since climate change acts as a threat multiplier, this

effort is being coordinated with GSA's cybersecurity initiative, which is also investigating risks to telecommunications and IT supply chains.

GSA is also working to include climate adaptation, resilience, and preparedness factors in relevant facility, product, and service contracts. GSA suggested the Federal Adaptation Community of Practice establish a federal working group to identify and prioritize sectors that face climate risks in the federal supply chain. This working group, which would include several other federal partners, could provide additional guidance to agencies. As part of this initiative, GSA would coordinate with other agencies to suggest the development of a FAR clause to advance climate adaptation and resilience. This clause would apply to all mission critical procurements of products, services, real property, and capital equipment, and would require bidding suppliers to evaluate climate risks to their supply chains and create climate risk mitigation plans to address any identified risks. Incorporating adaptation into the FAR could have a widespread and positive cascading influence on industry's efforts to prepare for climate change and reduce the federal government's risk to climate-related supply chain disruptions.

Timeframe: FY13 - FY20

Necessary Resources: Federal working group focused specifically on identifying climate risks in the federal supply chain.

2. **Policy or Funding Barrier:** OMB Circular A-11

Rationale

Without specific inclusion of climate factors in civilian agency management guidance and regulations, agencies are prevented from appropriately addressing climate risk in a timely or meaningful way. OMB Circular A-11 addresses agency management objectives, strategic plans and scoring impacts for construction, leases of capital assets and acquisition of real property. In 2011 GSA suggested the inclusion of climate factors within the agency strategic plan during OMB review, but this suggestion was not accepted. Below are A-11 items regarding transparency, disclosure and reporting:

- Agency Material Weakness: In some locations, climate risks will jeopardize GSA's statutory mission and operation. This currently is not an "Agency Material Weakness" disclosed in the annual financial report to Congress. Other climate risks that do not rise to the level of an Agency Material Weakness currently are not afforded a monitoring or management mechanism in the internal control processes.
- Federal Real Property Profile (FRPP): The FRPP does not enable GSA's Senior Real Property Officer (SRPO) to populate and discern real property portfolio data elements associated with climate risks, vulnerabilities, or costs. For example, it is not possible to record or track real property replacement costs following a 100-year or 500-year flood, or life-cycle costs associated with an increase in energy demand due to hotter temperatures. Changes in cooling degree days (CDD) will affect operational budgets for

energy. Section 31.9(f) of A-11 states "if you plan to acquire real property, you must include estimates consistent with the policies of Executive Orders 13327, and 13514 in your budget submission, and make sure that estimates for acquisition of real property under contract are consistent with obligations reported in object class 32 (see section 83.7)." However, there is no requirement for ensuring consistency with Executive Order 13653 for site acquisition.

- Without direct appropriation, adaptation will not be achieved. Budget prioritization, if continued without change in direction, is highly unlikely to address long-term gradual changes. For acute climate impacts, the increase in intensity, duration and frequency of extreme weather incidents will require more funding and refresh of trained response and recovery staff. It has been noted in multiple forums that the cultural tendency is to reactively respond to extreme climate events, while preventative steps to manage threats and opportunities from gradual climate impacts tend to be overlooked. These chronic, incremental risks are a relatively new area of concern; the experience of planning for and managing the impacts is slight; the scope is extremely broad; and our predictive ability is imprecise. Without funds prioritized to address the most vulnerable or critical assets and operations to climate impacts, GSA will be unable to meet its full potential to serve its clients.

Actions to Reduce Vulnerability

GSA has sought assistance from CEQ. OMB's next update should include Executive Order 13653 and specifically provide content to address factors regarding budget development. In the meantime, GSA is incorporating climate factors incrementally into transactions that it controls or influences. Though this work has begun, GSA does not yet have a complete scope of its extent or the effort that will be needed to accomplish it. GSA is working to make adaptation operational through the inclusion of criteria in the processes of procurement-related and infrastructure planning, requirements development and through their execution, both at the project and the portfolio scales. However, external guidance is essential for overcoming this barrier.

Timeframe: Unknown

Necessary Resources: External guidance is essential for overcoming this barrier.

3. **Policy or Funding Barrier:** Lack of emphasis on cost avoidance and mission valuation

Rationale

The current federal focus on cost savings tends to hinder efforts to avoid future costs. The lack of emphasis on cost avoidance limits efforts to co-fund adaptation projects between agencies that are co-located at the same site. It greatly impedes implementation and capacity building by limiting travel and reducing program funds and contract support for climate risk management.

As a specific example, per Executive Order 11988 on Floodplain Management,

the Interagency Floodplain Management Task Force is updating guidance on decision-making for projects that have potential impacts to (or within) the floodplain. However, to date this guidance does not include a mechanism for estimating flood-related losses, nor does it take account of how flood risks may be exacerbated as the climate changes.

Federal efforts to adapt to a changing climate are a public good from which private entities will also benefit. Monetizing the total value of federal mission continuity and assets (facilities and supply chain) and costs avoided by implementing up-front climate risk management strategies will help to build the business case for comprehensive climate risk management.

Actions to Reduce Vulnerability
GSA is working with its customers and through the Agency Adaptation Planning Working Group and the Federal Adaptation Community of Practice to find ways to share resources, particularly for co- located sites.

Timeframe: Unknown

Necessary Resources: External guidance is essential for overcoming this barrier. As in the previous section, which outlined internal GSA barriers, part of the solution is a concerted, determined process of education and change management. Significant time and effort will be necessary to expand the knowledge base needed to provide relevant knowledge and skills, and to manage change across large organizations.

4. **Policy or Funding Barrier:** Lack of climate resistant model building codes and licensed design professionals to design climate resistant sites and facilities

Rationale
Model codes used in the design, build and compliance process of structures and sites are based on historical climate, and do not reflect the future climate over their service life. Model codes are developed and maintained by standards organizations independent of the jurisdictions or entities (such as a federal agency) that adopt the code. It is unlikely that model codes will meet the needs for site-specific climate resistant design in a timely way due to the rapidly changing climate and the divergent motivations and beliefs of stakeholders that participate in the code development process. In addition, architectural and engineering design practitioners are not familiar with how to use climate projections to inform design decisions. A changing climate could increase operating costs for facilities, for example if future energy use does not take account of hotter temperatures. In addition, professionals licensed to protect the public health, safety and welfare of building occupants could be deemed negligent if they do not take foreseeable climate change impacts into consideration. Finally, designing for climate resilience may conflict with and frustrate legacy priorities in historic preservation and aesthetics as the choices to resist, accommodate or retreat may be costly.

Actions to Reduce Vulnerability
Pilot development of climate protection levels on mission critical projects to develop capacity in design profession and agency project management staff.

Timeframe: 5- 20 years
Necessary Resources: Technical staff familiar with climate change who can effectively communicate with and train agency leadership and staff developing or implementing

projects.

5. **Policy or Funding Barrier:** Lack of climate resilient building codes and licensed design professionals to design climate resilient sites and facilities

   Rationale
   As the owner of multiple renewable energy sites and systems, GSA has encountered significant regulatory complexity and restrictions on interconnected systems. For energy assurance, GSA is keen to minimize the regulation and interconnection barriers that hinder financing, installation and operation of distributed energy and storage systems. All agencies would benefit from overcoming these barriers.

   Actions to Reduce Vulnerability
   Pilot development of climate protection levels on mission critical projects using distributed energy generation and storage to develop capacity in design profession and agency project management staff.

   Timeframe: 5- 20 years

   Necessary Resources: Leadership in the federal interface (Federal Energy Regulatory Commission (FERC)) with the utility sector to develop decentralized energy generation and storage. Some states are moving forward in the efforts already.

5. Providing Information, Data, and Tools for Climate Change Preparedness and Resilience

Climate risk management is a challenging problem for which there is no single, easy solution. Although information, data and tools can assist in the analysis of the problem and can support decision-making, effective management of climate risks will also require professional judgment, leadership, and consideration of costs and benefits.

In order to provide quality and timely services to the American public, GSA coordinates with U.S. agencies to plan for climate change impacts that could affect their ability to fulfill their mission. This collaboration involves sharing of information of both climate- and non-climate related information across multiple federal agencies. Information includes historical and projected climate data, sea level rise projections, and climate risk management processes, as well as information on agencies' facility, supply and service usage, planning, and information technology infrastructure.

GSA participates in the White House Climate Preparedness and Resiliency Council and supports three of its four working groups. These groups are the Agency Adaptation Planning Working Group (EPA and CEQ), the Climate Date Working Group (NASA, NOAA, OSTP), and the Infrastructure Resiliency Working Group (DHS, DOE, National Security Council). To support

the launch of these working groups, OFHPGB, OMA and FAS have provided staff to attend sessions, review and comment on documents and work flow.

Through the Agency Adaptation Planning Working Group and its Federal Adaptation Community of Practice, GSA has provided compelling interagency coordination and adaptation advocacy. Working with their customers provides significant opportunities for interagency coordination in an environment of limited funds and different levels of understanding. Through its work, GSA has helped EPA, the Department of Treasury, DOJ, HHS, SSA, and other agencies to address climate change issues and impacts.

GSA participates as a stakeholder in the Council's Data and Tools working group and the USGCRP Interagency Adaptation Science Working Group. GSA provides comments seeking actionable science and uses information provided through these forums to inform or incorporate into GSA processes and business.

Internally, GSA established an enterprise-wide GIS program with an anticipated roll-out date in early FY2015 that will assist the agency in better serving its customers. The Adaptation Team is coordinating with the GIS team to identify data sets and discuss requirements for climate change adaptation planning. The teams together already discovered data accuracy and data sourcing issues and are investigating ways to address them so GSA is able to respond to customer inquiries for climate-related GIS products, such as maps identifying facilities located in floodplains or along the coast.

Since GSA largely operates at the federal level, its experience with state, local, and tribal interests is limited. Although these entities are not their core business, GSA does seek opportunities to work with them whenever possible. For example, GSA uses information it receives from other federal agencies to internally plan for climate impacts and also to serve as a model for other federal, state, local, and tribal agencies seeking to increase the resilience of their supply chains and assets in order to ensure continuity of services to citizens and potentially reduce long-term climate risk costs.

5.1. Interagency Efforts to Support Climate Preparedness and Resilience

Coordination of research efforts in understanding climate change and evolving risks, as well as of end-user engagement, can benefit both the research and can enhance the practical reach and application of research results. GSA is committed to collaboration with other decision-makers to grow an informed and engaged community of climate risk management practitioners. We are actively engaged in the following interagency efforts to support climate preparedness and resilience.

Agency Adaptation Planning Work Group
GSA is a regular, vocal participant in this group, which focuses on developing the Climate Change Adaptation Community of Practice (described below) and assisting agencies in the climate adaptation planning process. Through relationships built within this workgroup, we have advanced adaptation methods and approaches and gained insight into customer needs.

Adaptation and Mitigation Nexus Affinity Group
The purpose of the Adaptation and Mitigation Nexus (AMNex) Affinity Group, part of the National Climate Assessment Network, is to conduct research on, provide guidance for, and encourage implementation of integrative adaptation and mitigation practices. This work will inform the National Climate Assessment's focus on evaluating progress on adaptation and mitigation. Membership spans across federal, state, and local government agencies, non-profits, private sector organizations, and university institutions. We are a member of this affinity group and provide a perspective on finding integrative adaptation and mitigation practices in the federal supply chain.

Building a Climate Resilient National Capital Region
We participated in MWCOG adaptation events, including a climate impact symposium in May 2012. For threshing sessions in R11, we used portions of MWCOG's climate projection analysis of the capital region.

Climate Change Adaptation Community Of Practice (COP)
We are a regular participant in the Federal Climate Change Adaptation COP, assisted in planning and hosting the first meetings of the group, convened the first meetings of the Sites and Facilities Subgroup, and co-chaired the Grants and Contracts Subgroup.

Council on Climate Preparedness and Resilience
GSA participates in the White House Climate Preparedness and Resiliency Council and supports three of its four working groups: the Agency Adaptation Planning Working Group, Climate Date Working Group, and the Infrastructure Resiliency Working Group. To support the launch of these working groups, GSA has provided staff to attend sessions and review and comment on documents and work flow.

Industry
We have reached out to the insurance, actuary, and real-estate industries to discuss their approaches on adaptation. The Services to Support Federal Climate Change Adaptation Activities RFI engaged a large number of industry stakeholders in helping GSA to assess the marketplace for these services. In addition, we have held brainstorming sessions with the U.S. Environmental Protection Agency regarding next steps with the insurance industry, sustainable supply chain, and disclosures of climate risks in accounting standards. We have also investigated how Geographic Information Systems can assist with adaptation projects and the effort required.

Interagency Forum on Climate Change Impacts and Adaptation

We are an engaged participant at this forum of industry and government. With the U.S. Department of Energy, we presented a white paper on the Sites and Facilities Subgroup's efforts. We also presented on the Services to Support Federal Climate Change Adaptation Activities RFI.

NASA

We have a close relationship with the NASA adaptation planning staff, a pioneer in its approach for mission-critical sites. NASA is working on the challenges of incorporating climate projections into building codes and standards, including American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) climate zones for energy modeling and building enclosure analysis.

USGCRP / NOAA

We are piloting with USGCRP and NOAA to integrate climate science into adaptation planning. (See FY13 action 3 for additional information on this important collaboration).

USGCRP Adaptation Science Workgroup

We are a member of the USGCRP Adaptation Science Workgroup, which advances foundational science for adaptation decisions. As a non-science agency representative, we articulate science needs to secure investments in real property and supply chain and support mission continuity.

5.2. GSA's Interagency Work to Support Climate Preparedness and Resilience

To date, GSA has collaborated with agencies to share climate and asset information to inform trainings and internal operations. Due to the breadth of its assets and operations and its recent partnerships with agencies in FY2013, GSA has a unique opportunity to continue working with agencies such as USGCRP, NASA, and NOAA in order synthesize climate information into information useful for planning at the national, regional, and local scales.

For example, GSA has provided input into the development of USGCRP's Global Climate Information System (GCIS) initiative, which seeks to provide audiences access to a range of global change data and information from across agencies. As a stakeholder, GSA highlighted their departmental needs with regards to climate data. While the GCIS is still being developed, the climate.data.gov website was launched. GSA understands that these two initiatives will be merged at some future time and that it is important to develop climate data to aid decision making. Therefore, GSA will continue to support these efforts and provide its unique input as a stakeholder wherever possible and appropriate.

GSA can continue to work with other federal agencies to incorporate climate information into facility and supply chain planning in order to increase the resilience of its operations. It thereby continues to serve as an example for other agencies to follow. Below are existing inter-agency

efforts in which GSA has participated to accomplish these goals:

Regional Two-Pagers Advance Federal Climate Scenario Sessions

GSA's Public Building Service (PBS) and Federal Acquisition Service (FAS) partnered with other federal agencies in January 2013 to conduct climate scenario sessions intended to build capacity, capability, and confidence within the federal government to address incremental climate risks. Sessions were held at regional offices in Washington, DC, and Kansas City, MO. GSA developed a detailed storyline using climate trends and scenarios from the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Global Change Research Program (USGCRP) along with information on the selected assets in each regional office. Additional information and expertise was provided by the National Capital Planning Commission (NCPC), U.S. Department of Agriculture (USDA), and the Internal Revenue Service (IRS). The storyline described what the region might experience 50 years from 2013, using the more extreme end of the climate projections in order to minimize risk when managing assets with long anticipated life cycles.

Conducting climate scenario sessions with GSA staff and its customers and developing and implementing strategies in the near term to reduce climate risks can ensure continuity of services to citizens, and potentially also reduce long-term climate risk costs. The DC and MO sessions advanced organizational readiness for climate risks and advanced customer satisfaction and confidence that GSA can support their mission continuity in a changing climate. The sessions also informed priorities to be addressed in the PBS and FAS delivery cycles, including asset business plans, budget scoring, and the development of specific contract clauses to mitigate climate risks.

Enhancing Federal Agencies' Understanding of Executive Order 13653

GSA and the U.S. Global Change Research Program (USGCRP) partnered to developed a "hot annotated" version of Executive Order 13653, intended to enhance the understanding of the new requirements and federal adaptation planning efforts. The "hot annotated," or clickable terms, version of EO 13653 is housed on GSA's Sustainable Facilities Tool (SFTool, sftool.gov[8]), which helps identify and prioritize cost-effective strategies to make office buildings and workplaces more sustainable. Over time, the SFTool has expanded to include other related sustainability information, such as federal green purchasing requirements. The annotations contain links to federal external resources that help agencies better understand and implement EO 13653, definitions of new terminology, and strategies and best practices on how federal agencies are taking steps to prepare for climate change. By partnering with USGCRP, GSA was able to access reputable content and expertise for the hot annotated EO.

In early 2014, information on the new tool was shared with applicable federal working groups

[8] Direct URL: http://sftool.gov/learn/annotation/427/executive-order-13653-preparing-united-states-impacts-climate-change

and announced in the White House Council on Environmental Quality's GreenGov Leader, an edition of the Environmental Protection Agency's Climate Change and Water News bi-weekly newsletter, and was a lead item in a FedCenter Daily Newsletter. During the first month of its release, the hot annotated EO webpage posted strong website analytics figures, with 706 unique viewers spending an average of five minutes visiting the webpage.

The website will continue to be a resource for federal, state, local, and tribal entities interested in becoming familiar with the EO and supporting information. As the hot annotated EO is used by more members of the climate adaptation community, it can potentially enhance collaboration and infuse best practices into federal, state, local, and tribal climate adaptation, resilience, and preparedness efforts. Therefore, GSA views the hot annotated EO as a living tool and will continue to expand on the annotations as new information and best practices become available for interested agencies and organizations.

Climate Change Adaptation Self-Assessment

In addition to these efforts, GSA developed process-based metrics to monitor and evaluate the implementation and success of climate adaptation actions. Combining lessons learned from experts in the United Kingdom and the U.S. Forest Service, GSA crafted a Climate Change Adaptation Self-Assessment, a brief survey that allows GSA to track each region, service, and business line's ongoing climate change adaptation management process.

This Self-Assessment is important for GSA because it creates a balanced approach to climate change adaptation that includes building internal and external partnerships and preparing our agency staff to respond to climate change related issues. It will prompt representatives in each region, service, and business line to recognize their accomplishments and define what they want or need to accomplish in the following year. The Self-Assessment's process-based metrics ensure that each region, service, and business line works toward a balanced response to climate change adaptation.

Results will be used to measure and assess GSA's progress in adapting to a changing climate and will help us identify needs and share lessons learned. This will help GSA's Climate Change Adaptation and Resiliency Team assess strengths and identify areas for greater investment to accomplish particular elements at the region, service, or business line level. Results will also help us communicate GSA's progress, successes, and plans to key stakeholders. Depending on outcomes of the vulnerability assessment once it is updated with the new NCA information, GSA will revisit the Self-Assessment and determine the timeline for launching the assessment.

Appendix A: GSA Climate Change Adaptation Policy Statement

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

ADM P 1095.8

GSA POLICY AND PROCEDURE

SUBJECT: FY 2014 Climate Change Adaptation Policy Statement

1. Purpose. This directive establishes an agency-wide policy statement for the U.S. General Services Administration (GSA) to integrate climate change adaptation planning and actions into its decision-making processes, programs, and operations. GSA's policy assigns responsibility for implementing the climate change adaptation planning requirements in accordance with Executive Order (EO) 13653, *Preparing the United States for the Impacts of Climate Change*, EO 13514*, Federal Leadership in Environmental, Energy, and Economic Performance*, and their associated implementing instructions and guidance. By integrating climate change adaptation strategies into its programs, operations, and business model, GSA ensures that it executes its mission and operations securely, effectively, and efficiently in current and future climate conditions while contributing to the Federal Government's leadership role in sustainability and pursuing the vision of a resilient, healthy, financially stable and prosperous nation.

2. Background. GSA plays a significant role in procuring space, products, and services for the Federal Government. GSA provides space for over one million Federal employees in over 9,600 buildings and has an annual business volume of more than $50 billion, representing about 14 percent of the Government's procurement spending. While the scope, severity, and pace of future climate change impacts are difficult to predict, it is clear climate change could have important impacts on GSA's ability to effectively fulfill its mission, operate its facilities, and meet its policy and program objectives. GSA already has disaster response and recovery systems for extreme weather events. However, these systems do not focus on the impacts and risks associated with gradual climate change. This planning effort addresses projected incremental climate changes, such as sea level rise and changing temperature and precipitation patterns. Through climate change adaptation planning, GSA will continue to develop, prioritize, implement, and evaluate actions to mitigate climate change risks. Integrating climate change risk management and adaptation strategies into programs, operations, and business models ensures GSA executes its mission and operations securely, effectively, and efficiently in current and future climate conditions while ensuring GSA's ability to execute its mission effectively and efficiently during climate changes.

3. Policy. All GSA organizations will continue climate change adaptation planning, in consultation with GSA's Senior Climate Change Adaptation Official (Director, Office of Federal High-Performance Green Buildings, Office of Government-wide Policy) and implement the results of that planning using best available science and information. GSA will consider potential climate change impacts when undertaking long-term planning, setting priorities for research and investigations, and informing decisions affecting GSA resources, programs, policies, and operations. Responsiveness, awareness, and collaboration with Federal customers and industry will drive GSA's climate change adaptation planning toward innovation and value.

   To properly manage climate change risks and plan for climate change adaptation, GSA will update and publish its agency-wide Climate Change Adaptation Action Plan 1 year following the release of the National Climate Assessment. The Plan will include each of GSA's Service and Staff Offices as appropriate, and incorporate the findings and directives of this policy statement. The Plan will identify how climate change may impact GSA's ability to achieve its mission, programs, policies, and operations. It will also identify and prioritize climate risk management actions, establish a mechanism to evaluate progress, and continue to improve GSA's capacity to effectively adapt to current and future changes in the climate.

   Each GSA Service and Staff Office will review existing programs, operations, policies, and authorities to: identify potential long term impacts of climate change on the organization's areas of responsibility; prioritize and implement response actions that promote operational resiliency in response to potential climate changes; and continually assess and improve capacity to adapt to current and future climate change impacts and threats. This review will be coordinated with GSA's Climate Change Adaptation and Resiliency Team, the Office of General Counsel and other pertinent GSA organizations.

   GSA will fully implement E.O. 13653, *Preparing the United States for the Impacts of Climate Change,* issued by President Obama on November 1, 2013.

   GSA will fully implement the climate change adaptation implementing instructions issued by the White House Council on Environmental Quality (CEQ) under Section 16 of E.O. 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* and other applicable authorities.

   GSA will continue to apply the guiding principles and the flexible framework for agency adaptation planning found in the March 2011 *Federal Agency Climate*

Change Adaptation Planning Implementation Instructions and Support Document issued by CEQ.

GSA will coordinate with other agencies and interagency efforts, including the Climate Preparedness and Resiliency Council (the Council) and its work groups on climate change adaptation issues that cut across agency jurisdictions, including areas where national adaptation plans are being or have been developed, and will identify a process for sharing climate change adaptation planning information within GSA, other Federal Government departments and agencies, and the general public.

4. Responsibilities. The GSA Administrator, through the Senior Climate Change Adaptation Official (The Director of the Office of Federal High-Performance Green Buildings), has established a Climate Change Adaptation and Resiliency Team to research, draft, and implement the agency's Climate Change Adaptation Action Plan. The Climate Change Adaptation and Resiliency Team will include representation from various GSA offices, as appropriate.

   The GSA Senior Climate Change Adaptation Official is responsible for ensuring implementation of all aspects of this policy. This policy does not alter or affect any existing duty or authority of individual components or offices.

   The Heads of Service and Staff Offices (HSSO) and Regional Administrators (RA), in consultation with GSA's Senior Climate Change Adaptation Official and the Office of Federal High-Performance Green Buildings, will continue to review their existing programs, operations, policies, and authorities to identify potential impacts of climate change on the organization's areas of responsibility. In doing so, they shall: prioritize and implement response actions; identify risk management measures and integrate them with climate change mitigation activities; and continuously assess and improve GSA's capacity to adapt to current and future changes in the climate. In addition, HSSOs and RAs will ensure agency, service, and office plans are updated annually and fully coordinated with GSA's Climate Change Adaptation and Resiliency Team, the Office of General Counsel and other pertinent GSA organizations. HSSOs and RAs will also ensure organizational plans are closely coordinated with appropriate partner agencies, stakeholders and integrated with overall interagency efforts, including the Council and its work groups for those issues that cut across agency jurisdictions, including areas where national adaptation plans are being or have been developed.

5. Applicability. This directive applies to all GSA program actions, including but not limited to:

- Real property acquisition through Federal construction, purchase, or lease, including lease extensions;
- Acquisition of supplies and services for Federal customers
- Public buildings design and construction;
- Public buildings alteration;
- Public buildings operation;
- Real Property Disposal;
- Continuity of Operations and disaster support policy, planning, and operational coordination; and
- Emergency Support Function-7 co-lead responsibilities under the National Response Framework.

6. Effective Date. This directive is effective immediately and will remain in effect until it is revised or cancelled.

7. Cancellation. The following order is cancelled: GSA Order 1095.7 ADM, FY 2011 Climate Change Adaptation Policy Statement.

8. Signature.

DAN TANGHERLINI
Administrator

June 12, 2014
Date

Addendum: Updates to GSA Actions to Manage Climate Risks

Although a full update of the Agency's Climate Change Risk Management (CCRM) Plan will not occur until FY16, GSA recognizes the importance of continually evaluating progress on previously-stated climate change adaptation goals and reprioritizing activities as warranted. Thus, the plan was reviewed in light of newly available resources, including:

- EO 13653 (*Preparing the United States for the Impacts of Climate Change*) requirements for agency adaptation plans, December 2013
- *President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience: Recommendations to the President*, November 2014
- Amendments to EO 11988 (*Floodplain Management*), contained within EO 13690 (*Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input)* that require consideration of climate science in flood risk management planning, January 2015.
- *GSA Climate Change Vulnerability Assessment Report*, February 2015
- EO 13693 (*Planning for Federal Sustainability in the Next Decade*), March 2015

The table below provides a summary of interim progress toward goals and activities to manage climate risks. It also identifies next steps, required resources, key players, and prioritization. A timeline of these activities follows.

Progress toward Goals and Activities Defined in Section 3.3 (*GSA Actions to Manage Climate Risks*)

Goal or Action	Progress and Accomplishments	Next Steps	Required GSA Resources	Key Players	Status
Efforts to Support and Encourage Adaptation: Building a Climate Resilient National Capital Region Workshop Series	The National Capital Planning Commission (NCPC), Metropolitan Washington Council of Governments (MWCOG), and several Federal agencies (including GSA) sponsored two series of webinars and workshops—one series on the built environment and one on workforce, community, and natural systems—which concluded in December 2013 and April 2014, respectively. The series resulted in the development of an informational flyer and a full workshop report, which were published in September 2014. The workshop report details opportunities for intra-agency strategies to address climate change, as well as inter-agency coordination.	Near- to Mid-Term Goals that have been identified as relevant to planning future projects at GSA: 1.) Increase flood resilience in the Monumental Core 2.) Develop joint funding for large, multi-jurisdictional adaptation strategies 3.) Create an interagency body to address adaptation activities 4.) Optimize worker productivity in more frequent heat events GSA will raise awareness within the agency as to what is available (e.g., tools, up to date and comprehensive VAs in places where there are concentrations of federal properties). Taking advantage of any residual momentum from these activities, GSA should prioritize ongoing collaboration with counterparts at other Federal agencies and NCPC.	Dedicated climate change-focused staff with time available to collaborate with other key players	Climate Change and Sustainability programs at Federal Agencies (including GSA), NCPC, MWCOG	**Partially-Completed** • *Completed*: Workshop Series • *In-Progress*: Ongoing collaboration with NCPC and other Federal agencies • Select mission-critical long-life capital investments are incorporating climate change preparedness into facility performance requirements • *Planned*: ○ Increase flood resilience ○ Develop joint funding for multi-jurisdictional adaptation strategies ○ Optimize worker productivity in heat events

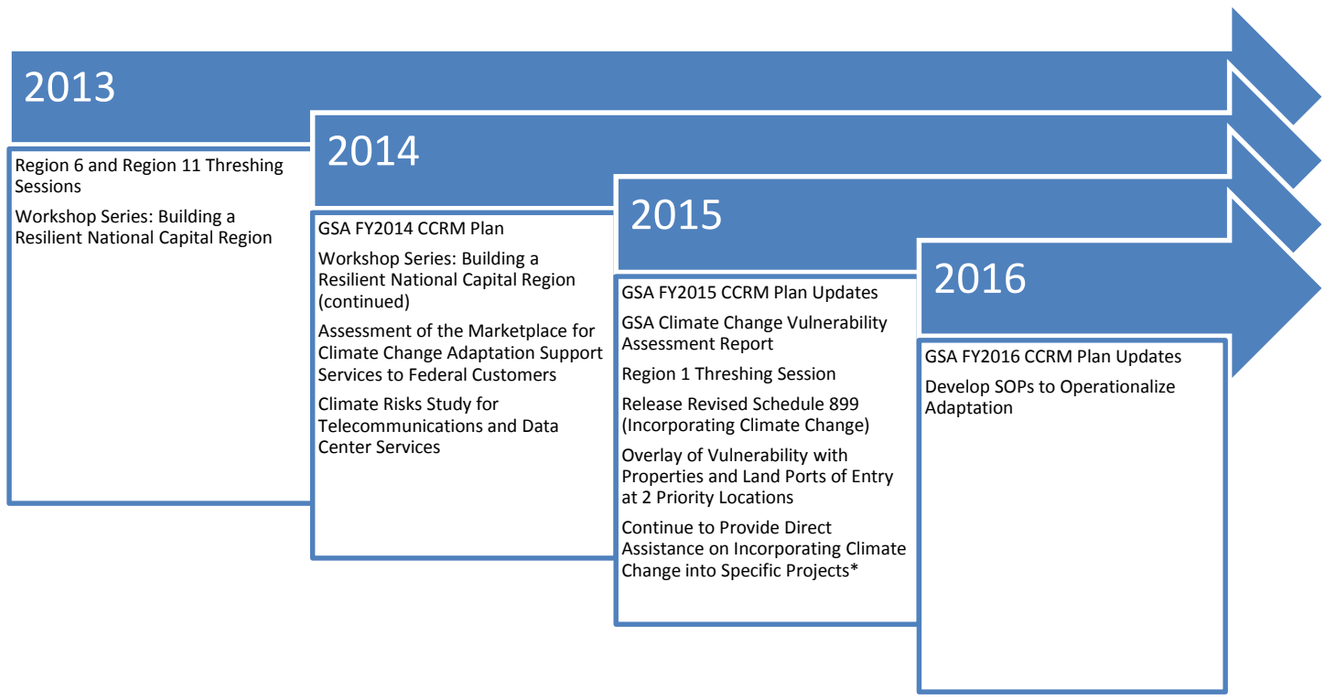
Goal or Action	Progress and Accomplishments	Next Steps	Required GSA Resources	Key Players	Status
Continuing Efforts to Encourage Adaptation: GSA Regional Climate Scenario Sessions	GSA has continued coordinating with several other Federal agencies to conduct climate scenario sessions to build capacity and capability to address climate risks. GSA held threshing sessions in the National Capital Region (Region 11) and Heartland Region (Region 6) in 2013. GSA is currently planning an additional threshing session in 2015 in Boston (Region 1), focusing on select assets on Boston's inner harbor	Representatives from PBS and FAS will continue with work with partners in the New England Region (Region 1) to plan a threshing session in Boston (tentatively planned for Summer 2015). They will additionally respond to other requests for threshing sessions, if received. As capital projects are funded, findings from the threshing sessions will be incorporated into relevant mission-critical and long service-life projects. Representatives from Regions, 1, 6, and 11 may also develop site-specific adaptation plans and coordinate with each other, other Federal agencies, and the PBS and FAS representatives at GSA's headquarters (HQ). GSA will also continue to provide direct assistance (e.g., capacity building and capability-building) within existing project teams for specific projects (e.g., FBI HQ, land ports of entry).	Dedicated representatives in each GSA Region; political will to identify and pursue strategies; financial resources to achieve goals	Representatives from DOJ and DOD in Region 1, Region 6, Region 11; PBS and FAS representatives at GSA HQ; partners at USDA in Region 6, and IRS in Region 11	**Partially-Completed** • *Completed*: ○ Region 6 session and outcomes report ○ Region 11 session and outcomes report • *In-Progress*: ○ Continue coordination between regions and GSA HQ. • *Planned*: ○ Region 1 threshing session and outcomes report
Update the Agency CCRM Plan, per the requirements of Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*	GSA updated its CCRM in May 2014. A full update of the plan is not planned for FY15 (per CEQ guidance), but progress updates are ongoing.	GSA will track progress toward goals and consider reprioritizing, as warranted by CCRM updates and new information that becomes available (e.g., through conducting a Vulnerability Assessment, other Agency activities).	Financial and labor resources to annually update the CCRM Plan; information on goal progress; agreement on Agency priorities	Climate adaptation and resiliency staff from PBS and FAS, led by the Office of Government-wide Policy (OGP)	**In-Progress** • Updates to CCRP action items on an annual basis
Initiate update to Agency and service-level vulnerability assessments based on the Third National Climate Assessment	GSA completed an agency-wide Vulnerability Assessment in 2015. The Vulnerability Assessment incorporated new science from the Third NCA. The Agency also conducted interviews of key staff in more than a dozen PBS and FAS offices to inform the report.	GSA is planning to conduct a location-specific vulnerability assessment in Boston (Region 1) in 2015.	Financial and labor resources to complete the Vulnerability Assessment report; partnerships with GSA regional offices to facilitate location-specific assessments; staff willingness to cooperate with efforts	Climate adaptation and resiliency staff in both the PBS and FAS branches; staff from GSA Regions of interest	**Partially-Completed** • *Completed*: Agency-wide vulnerability assessment report • *In-Progress*: Develop Self-Assessment Template • *Planned (tentatively):* ○ Region 1 and/or other location-specific vulnerability assessment(s)

Goal or Action	Progress and Accomplishments	Next Steps	Required GSA Resources	Key Players	Status
Define demand and supply for climate change adaptation support services	GSA issued an RFI to assess the marketplace for climate change adaptation support services after surveying Federal agency customers about their needs. In FY14, GSA assessed the responses to the RFI to formulate a final market assessment.	GSA revised the current Schedule 899 (Environmental Services) and will release it in FY15 and/or other Schedules according to responses to the RFI and market assessment. GSA is also revising project requirements to incorporate climate change, including the architecture and engineering statements of work for both internal agency project teams and teams that contract with the Federal government. The 2015-2016 Capital Investment and Leasing Program (CILP) Call contains a new section on compliance incorporating considerations of climate change (including background from the NCA). This has also been updated for the 2017 Call and will be updated as new information is available. Similarly, GSA has developed an update the P-100 regarding design for future climate.	Internal capacity to revise Schedule 899 and/or create new Schedules, including assessment of contracting and legal implications	GSA (FAS) staff; Federal agency customers (including DOI, NOAA, ACOE, and USGCRP)	**Partially-Completed** • *Completed*: Release RFI and incorporate respondents' data into schedule revisions • *In-Progress*: Incorporate responses to RFI into Schedule 899 • *Planned*: Released updated Schedule 899 (and, potentially, other schedules) • Update to P-100 regarding design for future climate

Deliver climate change adaptation training to GSA organizations by request	Activities completed to meet other goals also contribute to progress toward meeting this goal. These activities include hosting the threshing sessions in multiple GSA Regions and developing a Vulnerability Assessment report, which will inform adaptation needs.	In 2015, GSA will host threshing sessions at several buildings in Boston (Region 1).
		
		GSA is also integrating climate considerations in new project development in the CILP in close coordination with central office and regional staff in Portfolio and Design and Construction. These efforts are also related to implementation of the new Federal Flood Risk Management Standard (such as enhanced flood resilience under changing future conditions) being led by PBS FMSP.
		
		Additional opportunities include continued support for multiple projects reviewed for the FY17 CILP Regional Office/Central Office reviews and a Region 1 Land Port of Entry project (one of two planned in Madawaska, ME and Derby Line, VT), the San Juan, PR, FBI office, PBS Portfolio Capital Investment and Leasing FY16 call, and the SSA-focused Client Portfolio Planning team.
			Regional staff willing and interested in planning to minimize future costs.	Led by OGP's Office of Federal High Performance Green Buildings; in close collaboration with PBS and FAS staff	**Partially-Completed**
					• *Completed*: Several regional threshing sessions (discussed above)
					• *In-Progress*: Encourage incorporating climate change considerations into design and project development. Specific opportunities include energy efficiency and resilience to flooding events :
					  ○ New FBI HQ
					  ○ Region 1 Land Ports of Entry (Madawaska, ME and Derby Line, VT)
					  ○ San Juan, PR, FBI office
					  ○ Multiple projects in the FY17 CILP development process
					• *Planned*: Additional regional threshing sessions (including Region 1)

Goal or Action	Progress and Accomplishments	Next Steps	Required GSA Resources	Key Players	Status
Develop standard operating procedures (SOPs) to operationalize adaptation across agency and customer decision making	On-going and variable by office. Changes in SOPs area as explained under other goals or actions,	In addition to the next steps planned in the other goals or actions, the agency is interested in developing a decision paper for Federal customers to assist them in defining their risk tolerance levels; determining how to select potential future climate scenarios, and which extreme weather events or incremental changes are of most concern.	Variable by office and particular SOP of concern. Overall, political will is required.	Agency-wide and Federal customers	**Planned/Partially Completed** • Develop template decision support paper for Federal customers based on decision support paper already developed for the R11 FBI HQ.
Overlay of vulnerability with properties and land ports of entry, 2 priority locations	Maps have been developed, with layers and boundaries pending.	To further explore the vulnerabilities described in the agency's Vulnerability Assessment Report (February 2015), the agency may look at vulnerabilities at several specific locations, via a desktop review of data. Resources could include the Vulnerability Assessment Report, The Third NCA, GIS mapping (overlaying properties with environmental maps that include locations of rivers, forests, subsurface aquifers, wetlands, and sea coasts), and CMIP processing tool outputs.	Location data from GSA databases; engagement between GSA climate adaptation and resilience staff; contractor support	GSA climate adaptation and resilience team; contractor GSA Enterprise GIS team, PBS Urban Planning staff, PBS Portfolio Management, and the agency's climate adaptation and resilience team	**Partially Completed** • *In-progress*: Mapping activities are in-progress. Layers are being developed as boundaries and goals are refined.

Figure 1. Selected GSA Climate Change Risk Management Activities Completed, In-progress, and Planned



*Note that timing of capital project support is dependent on project schedules; assistance must be aligned to shifts in schedule.

Survey on Agency Climate Adaptation Plans

AGENCY: U.S. General Services Administration

POINT OF CONTACT: Kevin Kampschroer, GSA Senior Climate Change Adaptation Official ; 202 365 5880 , kevin.kamschroer@gsa.gov

INSTRUCTIONS: To supplement your agency's 2016 Strategic Sustainability Performance Plan (SSPP) response for Goal 10: Climate Change Resilience, please complete the following survey. Please indicate how your agency has addressed each question in its current Agency Climate Adaptation Plan. If a question is fully addressed, please provide a page reference. If a question is not or is only partially addressed in your plan, please provide a succinct narrative response to the question using the following *Agency Narrative Response Template*.

Element	#	Questions: Has your agency…	Yes/No/ Partial	Plan Page Reference
Risks and Vulnerabilities	Q1	Comprehensively assessed and reexamined, as appropriate, the climate change-related impacts on and risks to the agency's ability to accomplish its missions, operations, and programs?	Yes	2 – 5
Mission and External Programs	Q1	Identified opportunities to support or encourage smarter, more climate-resilient investment through grants, loans or other financial incentives?	N/A	-
	Q2	Identified opportunities to support or encourage smarter, more climate-resilient investment through program planning requirements?	Yes	21 - 23
	Q3	Identified barriers, prioritized and established timelines for implementing those opportunities?	Yes	24 – 33
Agency Internal Policies	Q1	Identified the internal agency policies that require updating to manage climate risks and build resilience in the short and long term?	Yes	24 - 33
	Q2	Identified the component/office responsible for updating those policies, the level of maturity of the effort (e.g., "initiated" or "ongoing"), and key milestones or timelines for implementation?	Yes	46 – 49
	Q3	Successfully revised policies?	Yes	-
Agency Facilities and Infrastructure	Q1	Identified which facilities and infrastructure may be impacted by climate change?	Yes	47
	Q2	Identified the components/offices responsible for addressing those risks, developed a strategy for addressing facilities and infrastructure that are at-risk, and identified barriers and timelines for implementation?	Yes	47
Data, Information and Tools	Q1	[For Agencies that Develop Climate-Related Data] Established clear goals and timelines to develop and share the latest data, information and tools across Federal agencies at the national, regional, and local levels?	N/A	-
	Q2	Establish clear goals and timelines to integrate the latest data, information and tools into Federal programs, policies, and operations?	-	-
Climate Literacy, Training and Technical Assistance	Q1	Conducted an assessment of climate literacy, training and technical assistance needs of agency staff and key mission-critical external partners?	Yes	13, 14, 18, 19
	Q2	Established clear goals and timelines for implementing climate literacy, training and technical assistance programs for key partners (internal and external)?	Yes	13, 14, 18, 19
Supply Chain	Q1	Identified climate change-related risks to critical supply chains?	Yes	21
	Q2	Identified and implemented actions to manage supply chain risks?	Yes	21

Agency Narrative Response Template

INSTRUCTIONS: Please complete one template for each Element that is not or is only partially addressed in your current Agency Climate Adaptation Plan. Agencies may provide one template for multiple questions for each element. This template is intended to facilitate progress review discussions; they are not intended to be a comprehensive response. Please be succinct, and limit responses to one page per element.

Not Applicable – Addressed in the Plan

Element:	Choose an item.
Question(s) under this Element that are not or only partially addressed:	☐ Q1 ☐ Q2 ☐ Q3
Action or Target Outcome:	
Please provide a narrative response.	
Level of Maturity/Status:	Choose an item.
Major Milestones and Timeline:	
Responsible Component/Office/Individual:	
Challenges or Barriers to Implementation:	

U.S. GENERAL SERVICES ADMINISTRATION

FY 2016 PROCUREMENT PLAN TO REDUCE SUPPLY CHAIN GREENHOUSE GAS EMISSIONS

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, established an overarching objective of reducing greenhouse gas (GHG) emissions across Federal operations and the Federal supply chain. Section 15 of the E.O., "Supply Chain Greenhouse Gas Management," requires the seven largest Federal procuring agencies to develop annual plans to implement at least five new procurements annually that include 1) contractor GHG management requirements or 2) evaluation criteria that consider contractor emissions and GHG management practices. Other agencies are encouraged to develop a procurement plan where beneficial to achieving agency goals and objectives.

GSA's FY 2016 Procurement Plan to Reduce Supply Chain GHG Emissions ("procurement plan") was developed and will be implemented by the agency Chief Acquisition Officer, in coordination with the agency Chief Sustainability Officer and others as appropriate. The procurement plan has been developed in accordance with the guidance and template circulated by the Council on Environmental Quality.

Unlike the rest of GSA's FY 2016 Strategic Sustainability Performance Plan and appendices, this procurement plan will not be made public. References to individual procurements in this plan are for planning purposes only and are not a guarantee that funds will be obligated or contracts awarded. Procurement sensitive information has been excluded.

U.S. General Services Administration

2016 PROCUREMENT PLAN TO REDUCE SUPPLY CHAIN GREENHOUSE GAS EMISSIONS

(Do not include procurement-sensitive information. Listing of procurements in this plan is not a guarantee that funds will be obligated or contracts will be awarded.)

I. Plan and Agency Information

Plan Submission Date:	June 30, 2016
Plan Fiscal Year (for implementation):	2017
Chief Acquisition Officer Name and Contact Information:	Troy Cribb, troy.cribb@gsa.gov, (202) 357-9611
Chief Sustainability Officer Name and Contact Information:	Kevin Kampschroer, kevin.kampschroer@gsa.gov, (202) 501-4411

II. Methodology for Selecting Procurements

*What is your agency's **methodology for selecting procurements?** Please select the appropriate selection criteria below (multiple selections are acceptable) and then describe approaches and considerations:* ☑ Industry sector, considering GHG "hotspots" or sources of high emissions ☑ Industry sector, considering state of industry GHG practices ☑ Alignment with agency mission and/or mission-critical products and services Procurement/acquisition size ☑ Procurement/acquisition schedule or timeline Features of procurement or acquisition plan (such as type of requirement, contract action, evaluation scheme, or specific competitive landscape) Other criteria	
Narrative description of methodology:	GSA first analyzed the GHG reporting capabilities of industry sectors where GSA procures goods and services. GSA utilized the EO 13693 Supply Chain GHG Emissions Reporting Workgroup's Report and third party disclosures websites (e.g., CDP) as the main sources of information regarding industry practices. These sources cited that professional services, IT services, telecom, transportation, finance, and sustainment and logistics sectors have the most advanced GHG management practices. In addition, GSA utilized a recent internal GSA hotspot study called Opportunities for Improving the Environmental Profile of GSA Expenditures that identified spend categories with the highest environmental impacts. We also recognized that larger businesses usually have implemented more best practices than smaller businesses. Based on GSA hotspots, current industry sector practices, and overall spend, GSA targeted the following sectors: construction, IT services, and telecommunications.

III. Strategies and Metrics to Evaluate Impacts

*What are your agency's **strategies and metrics for evaluating the GHG impacts** of these procurements? Examples include tracking agency-wide measures or goals, such as percentage of contractors or percentage of spend to suppliers that publicly disclose GHG emissions or have an emissions reduction target; quantification of the agency's Scope 3 emissions from purchased goods and services; or other factors. Include the office(s) responsible for tracking strategies and metrics.*	
Agency-wide strategies and metrics and lead office (if any):	The lead office for coordinating the implementation of the procurements in this plan is the GSA Office of Acquisition Policy within the Office of Government-wide Policy. This office will track the amount of contract spend on procurements that have incorporated GHG reporting, GHG targets, or other GHG management practices.
Sub-agency strategies, metrics, and supplier management/ feedback processes, including offices involved (if any; duplicate row as needed):	N/A
Other:	

IV. Summary of Procurements (5 required; others optional)

	Program Name	Summary of Requirement	Anticipated Award Date	Estimated Dollar Value
Ex.	*Domestic Delivery Services 3 (DDS3) BPAs*	*Government-wide BPAs for domestic package delivery services*	*May 2017*	*$1 billion*
1	Alliant 2	GWAC for customized IT services	Fiscal Year 2017	$50 Billion
2	Enterprise Infrastructure Solutions	IDIQ offering telecommunications and IT solutions	Fiscal Year 2017	$50 Billion
3	L.A. Courthouse Construction	New construction for Federal courthouse in Los Angeles, CA**	Early Fiscal Year 2017 (modification)	$300 Million
4	Alexandria Bay, NY Land Port of Entry Construction	New Construction for land port of entry	Early Fiscal Year 2017 (modification)	$226 Million
5	Toledo, OH U.S. Courthouse Annex Construction	New construction for Federal courthouse in Toledo, OH	Fiscal Year 2017	$98 Million
6*				

* The sixth procurement and beyond are optional; add rows as appropriate.

**This project is nearing completion; the design-build contractor will be retroactively measuring GHG emissions from construction.

V. Details of Procurements

Procurement Number 1	
Program name	Alliant 2
Contracting team POC	John Cavadias, john.cavadias@gsa.gov, 619-696-2856
Program or requirement team POC	Casey Kelley, casey.kelley@gsa.gov, (619) 696-2880
Summary of requirement	GWAC for customized IT services
Anticipated award date	Fiscal Year 2017
Estimated maximum dollar value (base and all options)	$50 Billion
Anticipated performance period	FY 2017 – FY 2027
NAICS codes	541512
PSC codes	541
Describe the type of contract action (for example, competitive single award, multiple award, BPA, IDIQ, or GWAC).	GWAC
Is the contract action a task order? If so, state the master contract used.	No
Source selection type (sole-source, LPTA, best value, etc.)	Best Value
Why was this procurement selected? How does it fit into the methodology described above?	This contract was selected based on the large dollar value, current industry capabilities to report GHG emissions, and potential for reducing GHG emissions.
Describe GHG-related contract requirements or source selection evaluation criteria to be implemented.	● There would be a requirement for all other than small contractors to publicly disclose their corporate-level GHG emissions, reduction targets, and progress against those targets as part of annual milestones for sustainability disclosure. ● These are organizational GHG emissions and not the emissions associated with the IT services to be provided.
Current status of procurement	Draft RFP that incorporates these GHG reporting requirements has been shared on FedBizOpps for feedback from industry.
For FY17 plan and beyond: state any lessons learned that will be incorporated into this procurement.	N/A

Procurement Number 2	
Program name	Enterprise Infrastructure Solutions
Contracting team POC	Timothy Horan, timothy.horan@gsa.gov, 703-306-6426
Program or requirement team POC	Fred Haines, Frederick.haines@gsa.gov, (703) 306-6291
Summary of requirement	IDIQ offering telecommunications and IT solutions
Anticipated award date	Fiscal Year 2017
Estimated maximum dollar value (base and all options)	$50 Billion
Anticipated performance period	FY 2017 – FY 2032
NAICS codes	517110
PSC codes	D304
Describe the type of contract action (for example, competitive single award, multiple award, BPA, IDIQ, or GWAC).	IDIQ
Is the contract action a task order? If so, state the master contract used.	No
Source selection type (sole-source, LPTA, best value, etc.)	Best Value
Why was this procurement selected? How does it fit into the methodology described above?	This contract was selected based on the large dollar value, current industry capabilities to report GHG emissions, and potential for reducing GHG emissions.
Describe GHG-related contract requirements or source selection evaluation criteria to be implemented.	● The contractor will be required to incorporate climate change adaptation strategies into risk-management programs to reduce property, infrastructure, and supply chain vulnerabilities. ● The contractor will also be required to do corporate sustainability reporting and will be encouraged to provide the location(s) (Internet URL or URLs) of one or more sources of publicly available information regarding company-wide environmental impacts and sustainable management practices (sustainability disclosures) on the contractor's EIS webpage. ● In making sustainability disclosures, the contractor will be requested to use existing, widely recognized third-party sustainability reporting portals and services such as the Global Reporting Initiative (GRI) Sustainability Disclosure Database (database of corporate social responsibility (CSR) reports) and the Carbon Disclosure Project (CDP) Climate Change and Water Disclosure Questionnaires.
Current status of procurement	RFP issued for this IDIQ and award is expected in FY17.
For FY17 plan and beyond: state any lessons learned that will be incorporated into this procurement.	N/A

Procurement Number 3	
Program name	L.A. Courthouse Construction
Contracting team POC	TBD
Program or requirement team POC	Maria Ciprazo, maria.ciprazo@gsa.gov, (415) 522-3128
Summary of requirement	New construction for Federal courthouse in Los Angeles, CA
Anticipated award date	Early Fiscal Year 2017 (modification)
Estimated maximum dollar value (base and all options)	$300 Million
Anticipated performance period	1 month for new GHG requirement
NAICS codes	236220 -- Commercial and Institutional Building Construction
PSC codes	Y1AA -- Construction of Office Buildings
Describe the type of contract action (for example, competitive single award, multiple award, BPA, IDIQ, or GWAC).	Contract modification to design build contract
Is the contract action a task order? If so, state the master contract used.	No
Source selection type (sole-source, LPTA, best value, etc.)	N/A
Why was this procurement selected? How does it fit into the methodology described above?	Contractor is known to have the capabilities to deliver unique requirements of pilot, and this project is one of the agency's largest construction projects.
Describe GHG-related contract requirements or source selection evaluation criteria to be implemented.	● Contractor GHG emissions at a construction job site has been found to be a major source of emissions for a project. Key contributors to GHG emissions at the job site include the following: lighting, trailers, cranes, elevators, labor force commute, diesel generators, and construction vehicle idling.. ● This contract will require the contractor to measure and provide the total GHG emissions from the construction job site.
Current status of procurement	Modification pending.
For FY17 plan and beyond: state any lessons learned that will be incorporated into this procurement.	N/A

Procurement Number 4	
Program name	Alexandria Bay, NY Land Port of Entry Construction
Contracting team POC	Andrew Woodring, andrew.woodring@gsa.gov, (315) 448-0928
Program or requirement team POC	Sebastian Asaro, sebastian.asaro@gsa.gov, (212) 264-2713
Summary of requirement	New construction for land port of entry
Anticipated award date	Early Fiscal Year 2017 (modification)
Estimated maximum dollar value (base and all options)	$226 Million
Anticipated performance period	Approximately two years
NAICS codes	236220 -- Commercial and Institutional Building Construction
PSC codes	Y1JZ-- Construction of Miscellaneous Buildings
Describe the type of contract action (for example, competitive single award, multiple award, BPA, IDIQ, or GWAC).	Modification to Construction Manager as Constructor (CMc) Contract
Is the contract action a task order? If so, state the master contract used.	No
Source selection type (sole-source, LPTA, best value, etc.)	N/A
Why was this procurement selected? How does it fit into the methodology described above?	This is one of the agency's largest construction projects. Design was completed several years ago but not funded; design will be updated and architect will show both GHG emissions associated with new design and GHG reductions compared with old design.
Describe GHG-related contract requirements or source selection evaluation criteria to be implemented.	Contractor will be required to measure and report the GHGs associated with the projected energy use over the life of the building and materials used in the building structure, foundation, footing, exterior walls and windows.
Current status of procurement	Contract will be modified to incorporate new GHG requirement.
For FY17 plan and beyond: state any lessons learned that will be incorporated into this procurement.	N/A

Procurement Number 5	
Program name	Toledo, OH U.S. Courthouse Annex Construction
Contracting team POC	Keith Kennedy, keith.kennedy@gsa.gov, (312) 886-2693
Program or requirement team POC	William Chapman, william.chapman@gsa.gov, (312) 880-9472
Summary of requirement	New construction for Federal courthouse in Toledo, OH
Anticipated award date	Fiscal Year 2017
Estimated maximum dollar value (base and all options)	$98 Million
Anticipated performance period	Approximately 2 years for design phase
NAICS codes	236220 -- Commercial and Institutional Building Construction
PSC codes	Z2AA -- Repair or Alteration of Office Buildings
Describe the type of contract action (for example, competitive single award, multiple award, BPA, IDIQ, or GWAC).	New Contract for Construction Manager as Constructor (CMc)
Is the contract action a task order? If so, state the master contract used.	No
Source selection type (sole-source, LPTA, best value, etc.)	Best Value
Why was this procurement selected? How does it fit into the methodology described above?	This is one of the agency's largest construction projects. It is a new project for which design has not yet begun.
Describe GHG-related contract requirements or source selection evaluation criteria to be implemented.	Contractor will be required to measure and report for each design concept the GHGs associated with the projected energy use over the life of the building and materials used in the building structure, foundation, footing, exterior walls and windows.
Current status of procurement	Developing statement of work.
For FY17 plan and beyond: state any lessons learned that will be incorporated into this procurement.	N/A